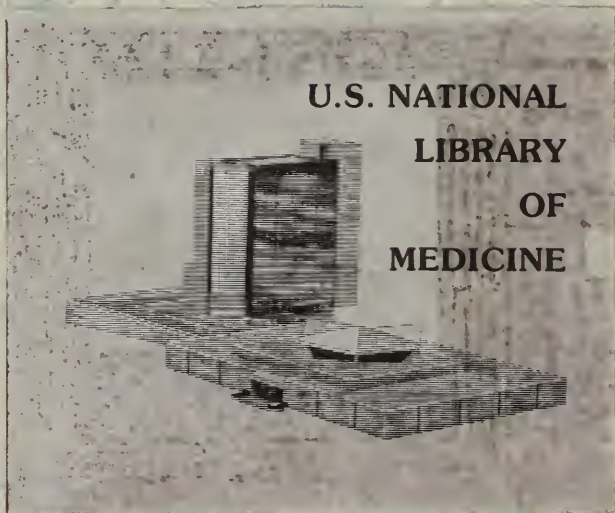




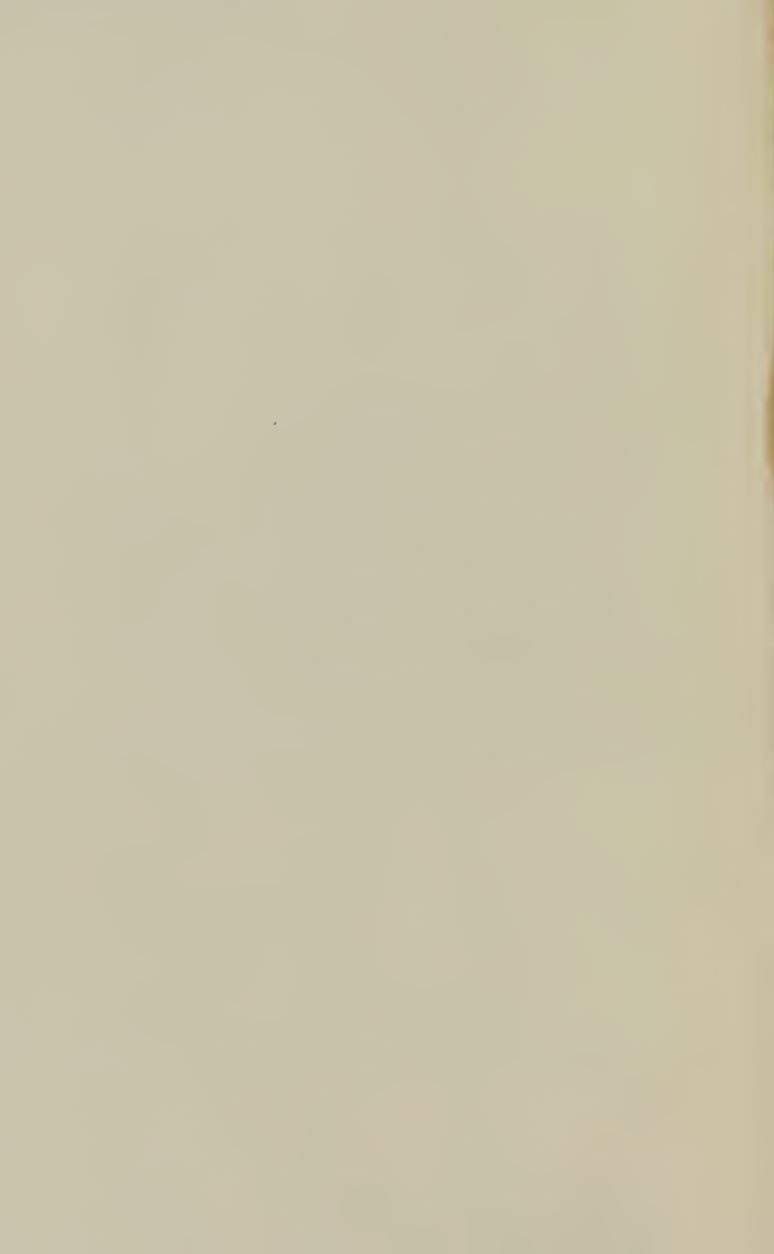


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A

POPULAR TREATISE  
ON  
BRONCHITIS,

EMBRACING

BRONCHIAL CONSUMPTION, HOOPING-COUGH,  
AND ASTHMA:

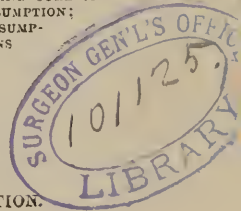
THEIR

NATURE, CAUSES, AND TREATMENT.

BY

✓  
ROBERT HUNTER, M.D.,

AUTHOR OF "PRACTICAL LETTERS ON THE NATURE, CAUSES, AND CURE OF  
CATARRH, SORE THROAT, BRONCHITIS, ASTHMA, AND CONSUMPTION;  
CARBON VS. OXYGEN; THE CARBON THEORY OF CONSUMP-  
TION; OXYGENATED AND MEDICATED INHALATIONS  
IN DISEASES OF THE LUNGS;" FORMERLY  
EDITOR OF THE "JOURNAL OF DIS-  
EASES OF THE CHEST."  
ETC., ETC.



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## P R E F A C E .

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IN the following pages I have endeavored to supply the public with a plain common-sense guide in all that relates to Bronchitis, Hooping-Cough, and Asthma.

Regarding the first of these diseases, most persons outside of the profession associate it with the idea of a *throat* affection. How this originated it is difficult to conceive, since no person possessed of ordinary intelligence could possibly suppose the *bronchial tubes* were in the throat. The reader will find this point fully explained and illustrated in the introductory chapter, and I trust made so clear that he can never afterward be in doubt on the subject.

The article on *Chronic Bronchitis* is one of peculiar interest to every person who values health. This disease is one of the most prevalent affections of this climate. It occurs in many different forms, and is common to all ages. It is one of the simplest kinds of lung disease, and yet is constantly mistaken for one of the most obscure. It is easily cured if properly treated,

and yet has hitherto proved almost as fatal as Consumption itself, with which malady it is constantly confounded.

My observations on *Hooping-Cough* can not fail to interest parents. This is essentially, though not invariably, a disease of early life. Not only is it distressing in its symptoms, but often most disastrous in its effect upon the health of the lungs—Consumption and Asthma frequently springing directly from an attack of Hooping-Cough. As few parents are indifferent to the sufferings and health of their children, I can not doubt that my effort to instruct them in what they ought to do to mitigate the severity of Hooping-Cough, and what they ought to do to cut short its duration, will be properly appreciated.

Lastly, under the head of *Asthma* the reader will find a plain account of every form of that distressing disease, from “*Hay-Fever*” and “*Rose-Cold*” to confirmed and hopeless *Emphysema*.

ROBERT HUNTER, M. D.

9 BREVOORT PLACE, TENTH STREET, }  
NEW YORK, Dec. 2, 1867. }



## PART FOURTH.

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### DISEASES OF THE BRONCHIAL TUBES.

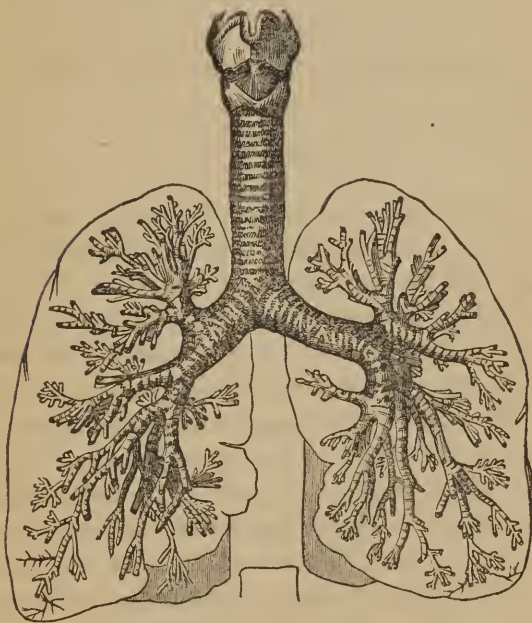
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#### CHAPTER I.

As I said, in speaking of the larynx and wind-pipe, the *bronchial tubes* are the *air-ducts* of the lungs, and lie entirely *within* their substance. They are, in fact, as much a part of the lungs as the lungs are a part of the body. I am particular in stating this, because many persons have the idea that they merely "*lead to the lungs*," while others, equally at fault, suppose them to run "*over the lungs*." I recollect once hearing an English judge ventilating his medical knowledge by gravely telling a jury he was instructing, that "*the bronchial tubes are passages which, though not a part of the lungs, yet carry the air around them!*" It is to be hoped his lordship's knowledge of *law* was not as imperfect as his knowledge of *anatomy*.

The following cut shows you the manner in which these tubes branch off from the *windpipe* and

spread, by almost infinite divisions and subdivisions, *within* the lungs, of which organ they compose the principal part. Were it possible to separate these tubes, and the air-cells in which they terminate, from what is called the *substance* of the lungs, all that would be left would be a little cellular tissue



and the blood-vessels and nerves. When, therefore, people talk of the bronchial tubes as “*not a part of the lungs,*” they are simply uttering *nonsense*.

You see by the cut how numerous are the branches

of those tubes, and yet it is not possible to represent by any illustration a *tenth* part of the number that really exist. All that it is possible to do is to show you the *larger* tubes, and the manner of their division and distribution in the lungs.

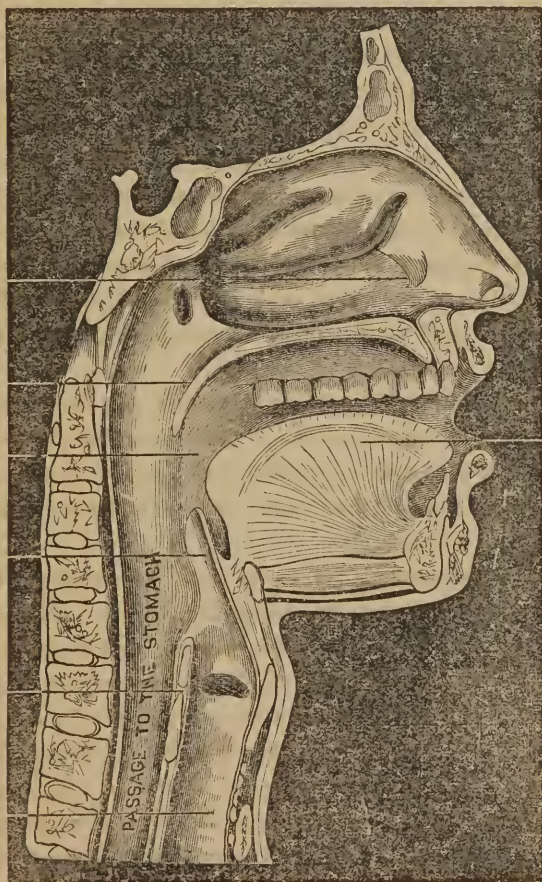
The large upright tube is the *windpipe*, through which we breathe. *Above*, it commences in the cavity of the throat, and *below*, it ends in the bronchial tubes. Observe the upper part of the windpipe, how it is widened out; this is what is called the *larynx*, in which lie concealed those wonderful "*vocal chords*" which produce the voice, at the entrance of which the little *sentinel* valve, called *epiglottis*, is placed to prevent food and fluids from getting into the "*wrong passage*."

Above and behind the epiglottis you observe in the next cut the cavity of the *throat*, and lastly, above the throat, the *nasal passages*. These parts are all connected, and together form what are called the "*air-passages*."

It is unnatural for us to breathe through the mouth, for it exposes the lungs to the *direct* influence of cold, raw air. The *nasal passages* were given us not only to *modify* the air, and *protect* the lungs from *cold* and *dust*, but also to warn us of the presence of noxious and impure gases in the atmosphere. If we did not *breathe* through the nose, we should not detect these impurities by the sense of *smell*, and would be frequently exposed to great danger without



being aware of it. When the nostrils are closed by catarrh, and we are forced to breathe through the mouth, the tongue becomes *dry* and parched, and



the larynx and lungs sensitive and irritable, showing that it never was intended we should habitually respire through the *mouth*. Hence the importance of always preserving the freedom of the *nasal passages*.

The manner in which the *air-cells* are connected with the bronchial tubes is, they surround their extremities like branches of grapes around their stem.

The way in which the blood is purified by the lungs is this:—The *black* blood, rendered impure by *carbonic acid*, is pumped into the lungs by the *heart*, and distributed over the *inside* of each air-cell in very delicate vessels. The chest expands, and *air* is drawn into the lungs to inflate these cells. The *thinness* of the membrane which separates the air from the blood permits the *oxygen* of the *air* to pass *in*, and the *carbonic acid* of the *blood* to pass *out*. The oxygen expels the poisonous carbonic acid, and changes the blood from a *dark* to a *bright red* color.

It is to effect this change in the blood that we require to breathe. The whole machinery of respiration—lungs and air-passages—was designed by the Creator for the fulfillment of this one office, which is so indispensable to life, that it can not be suspended for even *five* minutes without death ensuing. In that brief space of time the carbonic acid in the blood would so completely extinguish the spark of life that no human power could rekindle it, or again set in motion the arrested vitality.

Now, assuming that you understand the nature of this function of the lungs, and realize the absolute necessity of its proper performance, you can not fail to see that if the *pipes* which supply the air be *obstructed*, the lungs can not receive the quantity of air required to purify the blood; or if the air itself be *impure*, or *deficient* in that *vital oxygen* on which its virtue depends, the consequence must be imperfect purification of the blood, disease, and premature death; and that every deviation from the absolute purity of the air, and from the freedom of its admission to the lungs, poisons the blood and injures the health just in proportion to its *extent* and *continuance*.

With this brief outline of the office of the lungs and the anatomy of the air tubes and cells, you will be better able to understand the serious nature of the diseases which affect these parts.

The mucous membrane lining the bronchial tubes is liable to *inflammation*—both *acute* and *chronic*. This is called "*Bronchitis*." There are many kinds of chronic bronchitis, such as winter cough, consumptive bronchitis, &c. There is also a specific form of it, known as *plastic* bronchitis, which, like "*Croup*" and "*Diphtheria*," is attended by the formation of a false membrane within the tubes. We frequently find the mucous follicles the seat of *ulcers*, while *tubercles* form on the free surface of this membrane, and in the air-cells. Lastly, there

are several spasmodic diseases of these parts, such as *Hooping-Cough* and *Asthma*, all of which come within the scope of a treatise on the bronchial tubes.

---

## CHAPTER II.

### ON ACUTE BRONCHITIS.

ORDINARY *acute* Bronchitis is simply one of the consequences of a cold in the chest. In a *mild* form it is so common a disease that few persons escape one or more attacks every winter. When a cold settles on the lungs, the disease which results is either *Bronchitis* or *Pneumonia*—the former being of the *tubes* alone, while the latter involves the *whole substance*.

The *symptoms* of Acute Bronchitis depend on the severity of the attack, and vary as the disease progresses. We have the same *stuffing* in the *nostrils*, and discharge of clear water from the nose and eyes at the outset, which attend an ordinary cold in the head; but after the lapse of a time, varying from a few hours to as many days, the irritation reaches the windpipe, producing a hoarseness in the voice and a *ti kling* or *itching* sensation in the *larynx*,

which excites *cough*. From the windpipe it spreads rapidly to the *bronchial tubes*, producing a feeling of *rawness* or *roughness* under the breast-bone, and, in very severe attacks, sharp flying pains throughout the chest and back.

At first the cough is *dry*, but soon a *watery* or *frothy* secretion, having a *saltish* taste, is brought up from the *chest* by each paroxysm of coughing. Floating on this we frequently find small points of a *pearly* white color, some of which are tinged with a *black* matter resembling *soot*. In a little time the matter coughed up loses its watery character and becomes *thicker*—at first *whitish*, then of a *straw* color, and lastly *yellow*, with commonly a *greenish* tint. The cough is always troublesome, but it becomes much more so *after meals*, and in the morning on *rising*. In some cases, the mucus expectorated is very *sticky*, and then the effort to raise it produces a feeling of *rawness* in the part of the chest from which it comes—caused by forcing it away from the inflamed membrane to which it adhered.

The invariable tendency of irritation of the mucous membrane of the air-passages is to *descend*. If it begins in the *nose* it is liable to pass to the *throat*, and from the throat to the *larynx*, and from the larynx to the *lungs*. This is always the case with reference to the breathing organs, but it is also true, in a less degree, of the organs of digestion. A

cold which settles on the throat and descends to the lungs, may at the same time descend to the *stomach*, producing a *gastric fever*, and from the stomach to the *bowels*, ending in *diarrhœa*.

Hence it is that cases may differ greatly in their symptoms, and yet the disease be the same. The character of the *cough*, the *color* and successive changes in the *sputa*, the *hoarseness* of the voice, and *rawness* in the chest, are sufficient to indicate bronchitis; but to those we may have added a high fever, vomiting, and diarrhœa, because of its extension to the stomach and bowels.

*Oppression* and a feeling of *want of breath* is inevitable in every case of bronchitis, because the tubes through which we breathe are obstructed, first, by the frothy water, and subsequently by the thick yellow mucus. When this is tenacious, it occasions a still greater feeling of oppression. But I am now speaking of ordinary bronchitis only. When the disease extends from the larger tubes into the fine terminal branches, which connect with the air-cells, we have ingrafted on the original attack what in medical parlance we call *Capillary Bronchitis*. This is attended by an intense sense of *suffocation*; the cheeks become *pallid*; the *lips*, tip of the nose, ears, and finger-ends turn *blue*; a cold, clammy perspiration breaks out over the body; the breath loses its warmth, and gradually becomes *cool*; cough and gasping for breath are almost con-



tinnous, and unless some speedy change takes place for the better, death soon closes the scene by suffocation.

Such are the symptoms of *acute* bronchitis in *fatal* cases. It is always to be regarded as a *favorable* indication if the expectoration becomes *free*, of a *yellow* color, and comes up without *severe* cough. Thin *frothy* water and *sticky* mucus, on the contrary, which are only expelled by violent paroxysms, are *unfavorable*, as indicating not only the continuance of inflammatory action, but imperfect respiration, on which all the danger depends.

The *causes* of this disease are *colds*, or *smoke* and irritating gases in the air. In this climate the common cause is an ordinary *cold*, which settles on the *chest*. *Dampness* in the air, when accompanied by *cold*, renders the mucous membrane very irritable, and strongly predisposes us; but when to this we add that compound of *soot* and *carbonic acid* which is known as *smoke*, we expose the bronchial mucous membrane to the greatest possible peril.

A *foggy* atmosphere, occurring with a *raw, cold* air, is peculiarly trying to the lungs. This, fortunately, is comparatively rare in *America*, though common enough in *England*, where fogs prevail for several months of the year. It is wonderful how many persons are attacked with bronchitis during their prevalence. In London from 200 to 250 die a week, which is nearly double the mortality from

consumption. In the past ten years more than a quarter of a million of souls have been destroyed by this disease in England and Wales alone, out of a population fifteen millions *less* than that of the United States.

This fatality of bronchitis in the British Islands is so different from any thing known in this country, that it is interesting and important to trace it to its cause. To what are we to ascribe the fact that more than *six times* as many people, each year, fall a sacrifice to this disease in a given population? Is it the English manner of *treating* it, the *habits* of the *people*, or the *nature* of the *climate*?

It is certain that it is much more common in the *winter* than during the other seasons; but this is also the case in this country. It can not be the *cold*, for the mean range of the thermometer is much lower in New York than in London. Neither can it be attributed to the want of cleanliness, for English cities are proverbially clean, and American—well—not so. English people take more out-door exercise than Americans, but that certainly favors health, and enables them better to resist the inroads of disease. In the general mortality from disease the two countries are about equal, for of diseases not of the lungs, England compares favorably with America. The treatment of English physicians may be less judicious than that of American doctors—I think it is—but that certainly would not account



for more than a fraction of the difference ; besides, their published works do not reveal any *material* difference in the remedies employed. This brings us to the consideration of climate. In this respect America has immeasurably the advantage. As I said before, fogs prevail in England for several months of the year, when the air is raw, cold, and irritating. We occasionally have *fogs* in America, but when we do they only last for a few hours. A pure atmosphere becomes charged with watery vapor, which soon disperses, leaving a clear sky over head. A *fog* in England is a widely different thing. There the heavy surcharged air often lasts almost continuously for *weeks* together, during which time the dense vapor hangs in heavy clouds like a canopy over the whole country, effectually shutting out the sun, and preventing the smoke from rising. A *fog* in London means a compound of air, watery vapor, and black smoke from bituminous coal, together with the poisoned breath and emanations of three millions of human beings. Even when the fog is comparatively light, you can see that the smoke, instead of rising, *descends* into the streets as it leaves the chimneys. It gives to the whole atmosphere the *color* of black smoke. You *feel* it smarting the eyes and inflaming the nostrils as you grope your way through it. At times the darkness is so profound that at mid-day you can not read without the aid of a powerful lamp, while in the streets

nothing is to be seen save a dim outline of surrounding objects.

Such is the atmosphere of London in the winter season. *Three* injurious influences are always at work to induce disease—*cold*, *damp*, and *smoke*; and two hundred and fifty deaths from bronchitis a week tell us in facts—more significant than words—that the chief injury they inflict falls upon the mucuous membrane of the lungs.

TREATMENT.—In the adoption of remedial means for the cure of *acute* bronchitis, the physician must bear in mind that this is one of the simplest forms of pulmonary disease; that it is essentially *local*; that it neither depends on inherited taint nor acquired predisposition; that, in fact, it is a pure *inflammation* of the mucous lining of the air-tubes, and, as such, quite as likely to fall upon persons of strong as upon those of delicate constitution.

Until within a comparatively recent period, the treatment of all *acute* inflammatory diseases was of the *exhausting* kind. The object aimed at was to stop their progress by exhausting the vital powers of the patient. With this view, *bleeding*, *cupping*, *leeching*, *blisters*, and *calomel* were prescribed in every case; and the consequence was, that when the sickness and the bleeding combined did not kill the patient, he escaped only after weeks of suffering, and was sure to remain for months afterward a

feeble and emaciated invalid. But, fortunately for mankind, this practice has now been abandoned as unnecessary and injurious. It still prevails to a limited extent in England, but even there it is confined to the last representatives of a generation now rapidly passing away. These naturally cling to the practice and traditions of the past, and after having taught and prescribed bleeding, blistering, black draughts, and calomel for half a century, it is, perhaps, unreasonable to expect them to acknowledge that they have been all this time doing injury rather than good.

Bronchitis should be regarded from the outset as a *severe cold* settled on the air-tubes of the lungs, and, as such, treated precisely as a cold. Warmth to the surface; hot mucilaginous drinks; mustard plasters to the chest and between the shoulder-blades; soothing inhalations of conium, Indian hemp, and stramonium, repeated every four or six hours, and breathed as hot as the patient can bear—such are the means to be employed at the outset; at bedtime a bowl of thin gruel, well sweetened, and containing two table-spoonfuls of brandy and a little nutmeg, to induce perspiration and send the blood back to the surface.

The first effort should be to *throw off* the disease before it has become actually *seated*. If this can not be accomplished, and the *oppression* in breathing continues, caused by the obstruction of the tubes

by viscid mucus, the following mixture should be given until moderate vomiting takes place:—

- ℞. Sulphate of zinc—20 grains.  
Sirup of squills— $\text{℥}$ is.  
Wine of ipecac— $\text{℥}$ ij.  
Water (warm) to make  $\text{℥}$ vj. Mix.

Dose.—A table-spoonful every fifteen minutes. This unloads the air-tubes and relieves the breathing, after which discontinue it, and substitute—

- ℞ Chlorate of potash— $\text{℥}$ v.  
Camphorated tincture of opium— $\text{℥}$ j.  
Sirup of ipecac— $\text{℥}$ i.  
Water (cold) to make  $\text{℥}$ vj. Mix.

Dose.—A table-spoonful every two hours.

When the expectoration continues difficult after the active symptoms of the attack have passed off, sesqui-carbonate of ammonia in from three to five grain doses, combined with tincture of senega and sirup of squills, should be given two or three times a day. It is, however, only in very severe cases that these are required.

The bowels should be opened by a dose of magnesia—a teaspoonful in milk—followed by a seidlitz powder four hours afterward.

Unless the attack be mild, it is better that the patient should carry out the treatment under the supervision of a physician, for acute bronchitis is extremely liable to be complicated with other diseases. All that I desire to do is, to place the means

of intelligent self-treatment within the reach of such as *can not* promptly procure the assistance of a physician.

Fortunately, *acute* bronchitis is seldom fatal in this climate. The chief danger is that it may degenerate into a chronic condition, and ultimately end in consumption. Only to-day I had a painful example of this kind. A gentleman who, six months ago, was in excellent health, took a severe cold, which fell upon the bronchial tubes. It was regarded as a "*mere cold*," and nothing done to uproot it. At the end of a few weeks he suddenly spat up some blood—two months after, hectic fever and night-sweats supervened. He is now in the advanced stage of consumption, and so harassed by cough that he can not sleep at night. If I succeed in saving his life, the injury already done to the lungs will leave its mark for the remainder of his days, and all because he followed the foolish course of allowing a cold to "*cure itself*."

---

## CHAPTER III.

### CHRONIC BRONCHITIS.

WHEN a cold in the chest, or *acute* bronchitis, is not effectually uprooted by proper treatment, the active symptoms generally subside, and yet the patient

does not return to his former health. He discovers, perhaps, some *unusual warmth in the hands*, and finds that he can not take the same exercise as formerly without becoming *fatigued* and experiencing a slight feeling of *shortness of breath*. *Cough* and *expectoration* of thick mucus soon make their appearance, followed by a *hectic flush* in the afternoon of each day; *night-sweats* and *loss of flesh* follow, under the combined operation of which the patient's strength steadily declines, and he ultimately dies with all the symptoms of consumption. And yet this is not consumption at all; it is simply a *catarrh of the lungs*, or *chronic bronchitis*.

Chronic bronchitis does not, however, always manifest itself by precisely the symptoms above described. It occurs in a variety of forms, each one of which has some distinctive peculiarity. These I shall proceed to explain under the several heads by which they are known.

WINTER COUGH.—This name is applied to a very common form of bronchitis, which manifests itself in the cold weather of autumn, continues through the winter, and regularly subsides as summer approaches. Each succeeding winter it comes back again with increased severity, and in the following summer the subsidence is less complete. The cough is not severe. The matter *expectorated* is of a *yellowish-white color*. There is not for some years, as a rule, much disturbance of the general health, but sooner

or later the mucous membrane becomes altered in structure, and pours forth a matter having all the characteristics of pus, hectic fever supervenes, and the disease progresses slowly but surely toward a fatal termination.

Sir Thomas Watson, speaking of this disease, says:—

“You will continually be meeting cases of this kind. A person has what he calls a slight cold in the *winter*. He coughs and expectorates a certain quantity of *gray* or *transparent* mucus. In the *summer* his cough diminishes, or ceases altogether. The next winter the same thing happens again, and each successive return of the colder seasons of the year brings back in increasing severity the cough and the expectoration” (p. 52).

CONSUMPTIVE BRONCHITIS.—This term is used to distinguish a form of this disease which so closely resembles consumption in its general symptoms as only to be distinguished by a careful examination of the chest by the *stethoscope*. The *cough* is more continuous than in ordinary bronchitis, and is particularly troublesome in the *mornings*. The *matter expectorated* varies, being in some cases *sticky* and small in quantity, but more commonly copious and of a *light straw* color or *yellowish green*. It partially sinks in water, being, as it were, *suspended*, neither entirely floating, like ordinary *mucus*, nor sinking to the bottom, like *pus*. Streaks of *blood* sometimes



make their appearance in the sputa ; and now and then cases occur in which it has a disagreeable smell, as of *wet mortar* ; while in others there is a fœtor in the expectorated matter little less offensive than that caused by destructive mortification.

There is not, as a rule, much *pain* in these cases, but sometimes the cough is violent, and then we find a feeling of soreness under the *breast-bone* or in the *sides*, particularly the *left*.

The *breathing* is more frequent than in health, and each breath of *shorter* duration.

The *pulse* varies between 85 and 95 beats in the minute, which is from 10 to 20 above the healthy standard.

The *appetite* is, as a rule, capricious ; the *sleep* disturbed by dreams and broken by restlessness ; and there is loss of both *flesh* and *strength*.

The feebleness of the circulation, evinced by a sense of general *chilliness* of the surface and *coldness* of the hands and feet, exposes those having this form of bronchitis to *take fresh cold* easily. Whenever they do so, the expectoration becomes *clear*, like gum-water, and *frothy*, with greatly increased *shortness of breath*. As this subsides the expectoration falls back into the thick greenish-yellow matter already described, but continues for a long time much more profuse than before the attack.

When death takes place, it is from one of those acute attacks superinduced by a severe cold. The distress



in breathing becomes very great ; the lips lose their color and turn *livid* ; the hands, feet, nose, and ears have a cold, dead feel ; the breath is *cool* ; a clammy perspiration breaks out over the body, and every thing points to the approaching end.

If we examine the chest of one afflicted with this disease, we find an absence of that *dullness* on *percussion* which indicates the presence of *tubercles*. After death a *post-mortem* examination of the lungs reveals nothing beyond *softening* of the mucous membrane of the *larger* tubes, and a congested and inflamed condition of the smaller tubes and air-cells ; the former caused by the *chronic* disease, and the latter by the *acute* attack. No *cavities* are found in the lungs, nor any *tubercles*. Sometimes there is ulceration, but when it exists, which is rare, it is confined to the mucous membrane exclusively, and does not involve the general structure of the lungs. The whole machinery of respiration remains intact, and death is due solely to the obstruction of the tubes and cells.

Laennec, an eminent French authority, speaking of this form of bronchitis, remarks :—

“The disease ends in death after presenting symptoms so like those of consumption, that we have as yet no possible means of distinguishing them, except by a *post-mortem* examination. In fact, the most perfect resemblance exists between the two diseases in respect of the *sputa*, the *emaciation*, and all the other symptoms” (p. 77).

And Sir Thomas Watson observes:—

“When the membrane and the tubes which it lines become altered in structure, they pour forth a fluid which has all the qualities of pus; hectic fever generally is present; and the chronic disease tends slowly, perhaps, but surely to death. . . . So long, however, as no *organic* change has taken place, these chronic forms of bronchitis, that simulate consumption in their general symptoms, are within the reach of cure” (p. 548).

**HUMID BRONCHITIS.**—This form of the disease is almost exclusively confined to persons advanced in years. It is called *humid* because the secretion from the lungs is *profuse* in quantity, and of a thin, watery character. After the disease becomes fully established, the quantity of matter expectorated often amounts to a pint or a pint and a half in the 24 hours—half a pint being frequently raised by a single paroxysm of coughing. It is either a thin, watery secretion, or a ropy, transparent substance, like the white of raw eggs. There are usually two fits of coughing in the day—one on awaking in the *morning*, and the other in the *evening*. The difficulty of breathing is very great at times, but is always relieved by the expectoration of the viscid secretion which obstructs the lungs. When this is got up, the patient breathes well for the remainder of the day, or until more has accumulated.

I have said that this form of bronchitis is peculiar to persons who have passed the meridian of life. It

seems to single out those especially who have injured their constitutions by sedentary confinement or vicious excesses. It presents a striking illustration of age suffering for the sins of youth.

The *progress* of humid bronchitis is not rapid, but gradually the constant drain kept up from the lungs wears out the strength; the countenance assumes a pale, bluish tint; the body wastes; the blood becomes too thin to coagulate; the fits of coughing increase in frequency, and the want of breath becomes fearfully distressing. Death finally ensues from *suffocation*, the patient being too exhausted to *expectorate*.

This is the true "*Senile Bronchitis*" of the older writers, and the "*Suffocation Catarrh*" of some modern authors. It is not very prevalent in America, owing to the *dryness* of the climate, but in England most aged persons are carried off by it, literally *drowned* in their own mucus.

DRY BRONCHITIS.—This is, in many respects, the very opposite of the form just described. The secretion is scanty and thick, never watery. It is called *dry* bronchitis because there is very little expectoration. There is a dense, jelly-like matter, of a *bluish-white* or a *pearl-gray* color, very sticky, and difficult to raise. The lining of the tubes is *inflamed*, *swollen*, and *thickened* to such a degree as to diminish their size and *shorten the breath*. Then the smaller branches of the tubes are often entirely

closed by the sticky mucus, and occasionally a tube of very considerable size becomes so sealed up by it that no air can pass.

The *cough* is very troublesome after the disease is firmly established, but not so at first. There is always *shortness of breath*, and the chest feels tight and constricted when the patient attempts to cough.

The *prevalence* of dry bronchitis is probably greater than that of any other *chronic* disease; more than one-third of mankind suffer from it in some degree. Laennec says:—

“Almost all the inhabitants of the sea-coast and damp valleys are perpetually attacked with it; and even in the driest part of France, in *one-half* at least of those who are in other respects in good health, the *stethoscope* detects the traces of a slight habitual *thickening* or *congestion* of some part or other of the mucous membrane of the lungs” (p. 90).

The *symptoms*, commencing with the inception of the disease, are not marked by severity. It is the most insidious of pulmonary complaints. The subject of it is conscious only of being *short-breathed* when ascending an elevation or attempting to run. When a large portion of the lung is involved, a sense of *oppression* is experienced after meals and on slight exertion. By some this oppression is referred to the opposite side of the chest to that on which the disease is situated, or to a remote part of the same side, or even the region of the stomach. After a time, *difficulty of breathing* comes on, and con-

tinues for several days, the patient complaining of *tightness* in the chest, which is relieved by cough, and the expectoration of a tough, *jelly-like* substance. The cough by which this matter is raised is a mere *rasping effort* to clear the throat, and may probably not occur more than once or twice daily, and almost unconsciously to patients themselves. On inquiring if they have a cough, they will, almost without exception, answer "no," and yet during your conversation they will perhaps *hack*, and raise a little jelly-like mucus, of a bluish-white color, half-a-dozen times. At intervals the cough is more severe, and comes on in *paroxysms*—when it is fashionable to regard it as *nervous*. If the *stomach* be affected, or the *liver* deranged in its action, the cough is too commonly attributed to the state of these organs, and the lungs entirely overlooked and neglected.

Those afflicted with *dry* bronchitis are very liable to take cold. Every slight change in the weather is followed by an increase of the symptoms and a change in their character. The expectorated matter becomes more like that of a recent cold, but is never profuse, or of that greenish-yellow color which attends other forms of bronchitis. It loses its *pearly* character for a time, but soon falls back again. Sometimes the mucus is of a *grayish* color, from the admixture of a *soot* like substance, which we physicians call "*black pulmonary matter*." When a cold

becomes ingrafted upon a dry bronchitis, the shortness of breath increases until it amounts almost to a fit of asthma.

We say this disease is *latent* when the cough is slight and unattended by expectoration of any kind. This is equivalent to saying it is not *active* or progressing. It will sometimes remain latent for a long time, and then suddenly kindle up from some fresh attack of cold, or accidental exposure to dust or smoke. In this *masked* form it exists in thousands of persons who regard themselves as comparatively healthy.

The frequency of this form of bronchitis—its slow, insidious, and treacherous progress, and the disastrous consequences to which it so often leads—should awaken from their lethargy all who are nursing *dry* coughs of long standing in the vain hope of growing out of them. However slight and apparently unimportant such coughs may seem, they lead on by *sure gradations* to a premature grave.

PLASTIC BRONCHITIS.—The tendency of the mucous membrane of the air-passages to secrete an *albuminous* matter, is strongly exemplified in *croup*, *membranous sore-throat*, and *diphtheria*. Precisely what takes place in the *throat* and *windpipe* in these diseases, also takes place in the bronchial tubes in one variety of *chronic* bronchitis. It comes from the same causes—*cold*, *dust*, *smoke*, &c.—as ordinary bronchitis ; but, owing to the condition of the air at

the time, or the patient's state of health, it assumes the *plastic* form.

The peculiarity which distinguishes this kind of bronchitis is, that distinct *casts* form on the inside of the tubes, diminishing their caliber and causing great shortness of breath. It seems to be confined to the bronchial tubes, large and small, but seldom invades the windpipe or larynx. I have met with it more frequently in England than America, probably owing to the greater humidity of the climate, and the great amount of smoke in the air. In some instances it has seemed to arise from the offensive gases emitted by burning *bricks* and *lime*.

From whatever cause it arises, it is a most serious affection, occasioning great distress in breathing, amounting, in many cases, to a constant dread of suffocation. Why *bronchitis* should exist in one case with profuse *yellow mucous* expectoration, in another with a clear *watery* secretion, in a third with a *bluish jelly-like* sputa, and in a fourth with false membranous casts in the tubes, has never been satisfactorily accounted for; but it can only be due to the state of the air or the patient's health at the time of the attack—the exciting cause is the same in all.

MECHANICAL BRONCHITIS.—This is rather bronchitis produced by an unusual cause, than a distinct variety of the disease. It has been noticed that persons engaged in knife-grinding, and other similar mechanical trades which expose the lungs to constant



irritation from *dust* and fine particles of *steel* floating in the air, die at an early age of a disease very closely resembling consumption. The patient coughs, and spits up yellow matter resembling pus; hectic fever, night-sweats, and loss of flesh and strength follow; and he dies from what is supposed to be consumption. Now, the majority of these are cases of *chronic* bronchitis, with ulceration of the mucous membrane of the air-tubes. No doubt tubercles often develop themselves in the lungs before death ensues, but the essential nature of the disease is *bronchitis*, and the immediate cause of death bronchial obstruction. The tubercles which exist are either accidental or a consequence of the bronchial affection.

BLACK BRONCHITIS.—A most curious form of disease, commonly called *black* phthisis, is found among miners. It was first observed in persons engaged in *coal mines*, and was hence supposed to arise from inhaling *coal-dust*; but it is now known to prevail among all miners, and to be caused by inhaling the *smoke* from the oil-lamps which they carry for light. This, combined with the carbonic acid and carbureted hydrogen gases which abound in most mines, is inhaled into the lungs, the fine soot accumulates in the bronchial tubes as a coating of black soot, causing obstruction and ulceration. After the disease is established the patient begins to expectorate *black* mucus, and the lung gradually undergoes



a process of *carbonization*, being transformed into a dense black mass. The blood looks like ink, and flows sluggishly. The patient falls into a stupid, half-conscious state, from which he is only aroused by violent fits of coughing. Softening and destruction of the lung takes place, as in consumption, and death closes the scene.

In addition to the varieties of *chronic* bronchial disease of which I have spoken, we have a *dilatation of the tubes*. This occurs in several forms. The tubes of one *lobe* or a whole *lung* may be dilated throughout their entire length, or only swollen out at their *extremities*, or alternately *contracted* and *dilated* along their course.

The *cause* of dilatation is purely mechanical. That form of bronchitis which is attended with a copious *mucous* secretion almost always precedes and attends its development. Whenever a bronchial tube becomes blocked up by mucus in such a way that no air can pass through it, the patient is unable to raise by cough and expectoration that which is already formed. This not only remains, but what is secreted from day to day also accumulates, and gradually distends the tube into a kind of bronchial *abscess*. In this way one tube or many tubes at the same time may become dilated, and the function of the part of the lung in which they are situated permanently destroyed. This shows how important it is for the health of the lungs, that

whatever matter is secreted should be spat up. Hence it is that all cough-mixtures and nostrums which merely stop cough do injury, rather than good, by stopping the expulsion of the morbid matters formed in the air-tubes. Cough is the means by which these are brought up.

*Ulceration* of the bronchial tubes is another consequence of long-continued chronic bronchitis, when there are no tubercles, and nothing to justify the supposition that the patient is even predisposed to consumption. The symptoms which indicate this state of things do not differ materially from those of ordinary bronchitis. There is usually in coughing, singing, and attempting to call aloud, *pain* or *soreness*, or a feeling of *rawness*, at the bottom of the windpipe. After a time the pain becomes more fixed and constant. The cough is more troublesome, and the expectoration consists of points of yellow *purulent* matter mixed with *ropy mucus*. If the ulceration goes on, it is soon attended by alarming shortness of breath. The patient can not lie down, day or night, without the danger of being attacked with a suffocative cough. He dozes in a chair, and on awakening is liable to be seized with a feeling of impending suffocation. This is relieved by raising the matter which has accumulated during sleep. Emaciation is slow at the outset, but becomes rapid as the disease advances, and the patient dies with all the symptoms of consumption. Examine the

lungs, and you do not discover any *tubercles*. The lungs are still sound. The cause of death is obstruction of the bronchial tubes by the secretions poured out by the bronchial ulcers.

In addition to all these forms of chronic bronchitis there are still remaining several others, which are better known under distinctive names. *Whooping* or *whooping* cough is nothing more than *spasmodic* bronchitis, arising from one particular kind of irritation; and asthma is another form of the same disease, occurring in paroxysms, and attended by spasmodic contraction of the smaller bronchial tubes. Those diseases, however, are better known under these names, and I shall therefore make them the subject of separate chapters.

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## CHAPTER IV.

### TREATMENT OF CHRONIC BRONCHITIS.

IF you have read attentively what I said on the *nature* of *chronic bronchitis*, and on its *seat*, you will understand that it is a *local* inflammation of the lining membrane of the bronchial tubes, and hence *in* the lungs, and as much a disease *of the lungs* as consumption itself. To cure a local disease, it is necessary to apply our remedies *locally*—that is to

say, directly to the part affected. *Sore throat* is a local disease, and we treat it by gargles, washes, and vapors, applied to the affected part. *Ophthalmia* is a local disease of the *eye*, and if you go to the eye infirmary, you will see that the physicians there prescribe washes and ointments, to be applied directly to the eye, to cure it. Have you ever seen an ulcer on the leg? If so, you know that it is invariably treated by dressings applied to the ulcer. On this principle we use *injections* in diseases of the bowels and other passages. Even *tonics*, *emetics*, and *purgatives* go directly to the parts upon which they are intended to act. If the practice of applying medicines to the diseased part is correct in principle in one local disease, it is correct in all; if it is necessary to the successful treatment of chronic inflammation of the mucous membrane of one part, it must be to the mucous membrane of every part. We have no right to say that so much of the mucous membrane must be treated *locally*, and so much without local remedies; or that a disease in the throat must be treated *locally*, and the same disease in the lungs, *constitutionally*. Either the principle is *true* or it is *false*. If it be true, we can not desert it, no matter how difficult it may be to apply it in particular cases.

I assume that it is a grand desideratum in the treatment of all diseases of a local nature, to get the remedy *directly to the organ or part affected*. It is

as irrational as it is cruel, to abandon what we know to be a correct principle in the treatment of disease; and yet does not every medical man do this when he fails to treat bronchitis by local means? He admits that the disease is a local disease. He acknowledges that its seat is in the *lungs*, and yet he persists in treating it through the *stomach*. Who can wonder that it is so seldom cured when this course is still persisted in? If washes and ointments could be applied to the air-tubes, every physician would treat bronchitis by local means; but since this can not be done, and to reduce solid and fluid remedies to vapor requires an inhaling instrument, and entails a great deal of trouble, too many content themselves with doctoring the *stomach*, and leave the *lungs* to take care of themselves.

Sir John Forbes aptly remarks:—

“In this case, as in that of mediate auscultation, it is probable that the *trouble* requisite for the application of the means is the principal cause of their not being applied.”

And “The Lancet” observes:—

“The utility of *local* medication of the air-passages, by the inhalation of water impregnated with various medicines, is extensively recognized by the profession. The absence of any simple and efficient apparatus for the purpose, is often *the only reason why the great relief which such applications are capable of affording is withheld from the patient.*”—*Lancet*, Feb. 11, 1865.

It certainly can not be very satisfactory to the invalid to learn that the "*trouble*" which it entails upon the physician, and the want of an *inhaling instrument*, are considered sufficient reasons for denying him "*the great benefits*" which inhalation is able to afford, and that he is treated through the stomach merely to save the doctor the trouble of procuring or contriving a proper *inhaling-bottle*! To my mind, whoever fails to employ the very best means of which he has any knowledge, not only pursues a quackish and unscientific course, but actually endangers the lives of his patients thereby.

By reducing medicines to vapor we are able to apply them to the air tubes and cells of the lungs as easily as we can apply solid and fluid medicines to the stomach or the external parts of the body; and we have the authority of Professor Carpenter for saying, that

"It is most astonishing to witness the extraordinary increase in potency which many substances exhibit when brought into relation with the blood in the gaseous form."

And he adds:—

"The pulmonary surface affords a most convenient channel for the introduction of medicines which can be raised in vapor when it is desired to affect the system speedily and powerfully."—*Physiology*, p. 298.

As diseases of the *lungs* threaten to destroy life, I imagine there are few patients who do not *wish* to

avail themselves of the "*most convenient channel*" to escape from danger and suffering, or who would object to receive the most "*speedy and powerful*" curative action possible to derive from medicines. Now, it is because medicines in *vapor* do act more speedily and powerfully than when administered as *solids* and *fluids*, that they are capable of producing better effects than can be attained by other and cruder forms. *Inhalation*, then, means a mode of administering medicines by *breathing* or *inhaling* them into the *lungs* instead of *swallowing* them into the *stomach*. To be able to inhale medicines, it is necessary to first reduce them to *vapor*, in which state they are readily carried by the air; and, as Professor Carpenter justly observes, "it is most astonishing to witness the extraordinary *increase* in potency" which they exhibit when so administered. In the treatment of all diseases of the bronchial tubes and lungs, we require not only a speedy and powerful curative action, but a *direct application*; and by no means except *inhalation* can we possibly obtain it. The experience of the past has fully established the fact, that chronic diseases of the lungs can not be cured by medicines administered through the *stomach*. Inhalation, therefore, is not only the last hope of those afflicted with these diseases, but it is the only *rational and scientific* means by which we can treat them successfully.

Having decided upon the plan of treatment which



must be adopted in *chronic bronchitis*—for what I have said applies equally to every form of the disease, under whatever name it may be known—the next thing is to ascertain what instruments are necessary and what medicines are to be used.

A cut of the inhaling instrument invented by me, together with full instructions how it is to be used, will be found on the fly-leaf of this pamphlet. I need hardly say that in the size of its tubes, the quantity of the inhaling fluid it holds, and the material of which it is composed, I regard it as superior to any of the many *imitations* of it which have since appeared.

The medicines to be inhaled vary with the object to be attained, and as this is not the same in all cases, no specific rule can be laid down. The physician's judgment of the case, and his experience in the use of medicines by inhalation, must be the guide in each instance. The most that can be done is to classify the remedies according to their action. I make four classes: *First, Expectorants*, which are necessary in all cases of difficult expectoration when this arises from the sticky, tenacious character of the secretions. They are also required whenever the patient is too feeble to raise the matter in the lungs without assistance. *Second, Astringents*, which are indicated whenever the mucous membrane is in a relaxed condition, and the secretion so copious as to exhaust the vital powers. *Third, Sedatives*, which



are necessary to soothe the inflamed membrane, arrest cough dependent on nervous irritation, and promote sleep; and lastly, *Alteratives*, which embrace every medicine which has power either to *alter* the condition of the mucous membrane or improve the state of the blood. Alteratives are of two kinds; *local*, or such as act directly upon the tissue of the lungs, and *constitutional*, or those which enter into the blood and act upon the entire system.

In prescribing for a case of chronic bronchitis, the physician must first ascertain the form of the disease, and the peculiarities and complications which attend it. If the expectoration is difficult, owing to the tenacious character of the secretion in the lungs, he should order a combination of *expectorants* and *sedatives*, to soothe the mucous membrane and unload the air-tubes. If, on the other hand, the expectoration be too copious, he should strive to diminish it by a combination of *astringents* and *sedatives*. The alterative class is applicable to all forms; but here again the physician must employ mild alteratives in cases attended by a very irritable membrane, and more active alteratives in cases which are less inflammable; and he must combine these with sedatives, or expectorants, or *both*, according to the symptoms of each particular case.

Then, keeping in mind the nature of the disease, and that there is always a tendency to congestion of the mucous membrane, we must strive, by proper

clothing, and mild counter-irritation, to draw the blood to the surface of the body. Every thing likely to expose to fresh colds must be carefully avoided or guarded against. The diet must be plain and nourishing, but *not* stimulating. Fresh meats, plain vegetables, and good bread, with tea, coffee, and milk, are all that is necessary—spirituous drinks are decidedly objectionable as a rule in bronchial cases; but now and then we meet with a case, attended by great prostration, in which *wine* or *porter* are as necessary to support nature as beef-tea.

The state of the bowels must be carefully looked to, and under no circumstances constipation permitted. If the bowels do not properly perform their function the whole health suffers. But here again we must consider what are the habits of the patient in health. To one person it is as natural that the bowels should only act every second day as it is to another that they should act *daily*. You must not force nature by trying to equalize such cases. Find out the natural habit of the patient and assist nature to restore that, whatever it may be.

The symptoms—such as cough and pain—will be controlled by the means already pointed out: the former by the sedative inhalations, and the latter by the counter-irritation to the chest.

Lastly, *Oxygen* inhalations must be employed to restore the purity of the blood, whenever the

breathing is oppressed. If this be not done, the diminution of the patient's breathing capacity is followed by the accumulation of carbonaceous impurity in the blood, where it exerts so injurious an influence as to counteract all the benefits of treatment, and render recovery impossible. When considerable obstructions exist in the bronchial tubes, the *carbonic acid*, which constitutes the blood's impurity, is only partially removed; part of it is retained, and continues to circulate through the system, poisoning and deranging the tone of every part. *Shortness of breath* is an infallible evidence of this, and that the blood requires more oxygen than it can obtain from the diminished quantity of air received through the lungs. It is nature asking for what she requires, just as *thirst* and *hunger* are nature's demands for *food* and *drink*. If the physician, instead of supplying it, orders the patient *cod-liver* oil to put into his stomach, or *bark*, or *iron* tonics to improve his digestion, he gives a stone in place of bread, which can do no possible good, and may do much harm. The blood—contaminated through the inability of the lungs to obtain sufficient oxygen, and the failure of the physician to supply it—becomes unfit to nourish the tissues, and, sooner or later, deposits a carbonaceous sediment in the lungs, which constitutes that substance known as *tubercle*. It is in this way that bronchitis leads to *consumption*.

Dr. Carpenter says :—

“Of all the injurious ingredients *carbonic acid* is, without doubt, the one most abundantly introduced into the blood, and it is also *most deleterious* in its effects on the system, if allowed to *accumulate*” (p. 263). “If the respiration be lowered in amount, a large proportion of *unoxidized* or *imperfectly oxidized* excrementitious matters *accumulate in the blood*” (p. 373).

And Dr. MacCormac, speaking of the effects of imperfect respiration, remarks :—

“Hence the carbon is retained unoxidized, in other words, not discharged, or sufficiently discharged, from the blood ; and finding no adequate outlet . . . is deposited mainly as a *hydro-carbon* in the lungs and other organs, under the form of the body known by the designation of *tubercle*” (p. 113).

By understanding how bronchitis tends to consumption, we are able to ward off the danger of tubercles by proper treatment. I have thought it well to make the above quotations, that the reader might see why I regard *oxygen* as the chief reliance in all diseases attended by *shortness of breath*, or dependent on impurity of the blood, and that my views are sustained by high contemporary authority.

## CHAPTER V.

## HOOPING-COUGH.

THIS peculiar disease has its seat in the mucous lining of the bronchial tubes, and yet differs in several respects from all of the forms of chronic bronchitis already described.

It *begins* as an ordinary attack of *bronchitis*, and, for a week or ten days, can not be distinguished from that disease. There is the same *dry cough* at the outset, followed in a short time by mucous expectoration. Some *fever* is usually present, evinced by heat of the skin and a quickened pulse—and now and then cases are met with in which there is some *delirium* and *muttering* in the sleep. But there is nothing in all this that would lead us to suppose the child was laboring under the early symptoms of hooping-cough.

At the end of a week or ten days a new symptom makes its appearance, and at once reveals the nature of the disease with which we have to deal. The cough comes on in fits, which last for half a minute or so and then cease. In a moment or two they return again. These alternate fits and intermissions continue for perhaps ten or fifteen minutes altogether. During the fit the child struggles for breath, the face puffs up, the lips turn blue, and then we

hear the peculiar *hooping* noise which gives the disease its name.

Apparently a spasm takes place, which prevents the child from breathing, and it is when that relaxes, and permits the air to enter the lungs, that the *hooping* sound is heard. I have watched children laboring under this affection with particular care, and am satisfied that the hooping sound is invariably produced by the rush of air through the *larynx* at the moment the spasm relaxes. The child expels not only the *tidal* air, but a considerable part of the *residual* air, from the lungs, by a series of convulsive puffs. This constitutes the *fit*, and produces a tendency to a vacuum in the chest, to prevent which the air rushes in the moment the spasm relaxes, with sufficient violence to produce the *hooping* sound.

Between the paroxysms of cough there is usually a considerable interruption, during which the child returns to its play, and soon seems to forget that any thing unusual has happened.

When the disease is very severe, and the paroxysm prolonged beyond a few minutes, the face grows alarmingly puffed; the eyes are strained and blood-shot; blood sometimes issues from the nose, mouth, and ears; a cold perspiration breaks out over the body; convulsions and sometimes sudden evacuation of the bowels, follow. Such cases are always attended with imminent danger, and are liable to terminate

fatally, the child falling into a stupor from which it can not be rallied.

The termination of each fit is followed by expectoration of a clear fluid, looking like gum-water or the white of raw eggs. It is seldom thick or yellow during the spasmodic stage of the disease, but becomes so toward its close.

At first there will commonly be several fits in the day, but gradually these decrease in frequency until only two occur a day—morning and evening.

Hooping-cough has no fixed duration. In some it lasts only a few weeks, and in others many months. A sign that it is disappearing will be the ceasing of the hooping sound in the cough, and the expectoration becoming thick.

In many cases hooping-cough is a mild disease, and appears to run its course without apparent injury to the general health; but it is, nevertheless, frequently fatal, and even when it does not end in death, it often lays the foundation of diseases in the lungs or brain, under which the child ultimately sinks. In England it is probably more fatal than in America, owing to the dampness and variable character of the climate. Dr. Walsh, one of the physicians to the Hospital for Diseases of the Chest, tells us that no less than 9,107 children were destroyed by it in England in a single year. This fact shows the fatal severity with which it sometimes



prevails, and should act as a warning never to neglect children suffering from it.

Its *causes* are unknown—that is to say, we have never been able to determine in what particular condition of the atmosphere it takes its rise. The presence of something hurtful, or the want of something beneficial, in the air, is believed to be the cause of this, and all diseases which occur as epidemics. What would amount to a mere ordinary cold at one time, might at another become hooping-cough, just as the *simple sore-throat* of one season becomes the *malignant diphtheria* of the next.

Hooping-cough is an example of a disease being both *epidemic* and *infectious*. It arises from the state of the air, but, once being set up, it spreads by infection from one child to another. The *breath* is sufficient to convey it, and even clothing worn by children affected by hooping-cough will retain sufficient of the virus to produce the disease. Dr. Walsh mentions a striking example of this: A child contracted the disease in India, and on the way to England its clothing was given out to wash at the Island of St. Helena; the consequence was, that the children of the laundress took the disease, and it subsequently spread over the whole island.

The chief *danger* in hooping-cough arises from the violence of the cough and the stagnation of the blood in the lungs and *brain*. Rupture of the air-cells is a common consequence of the former, and



*pneumonia* and *water on the brain* of the latter. *Asthma* often takes its rise in an attack of this disease.

Foolish people will say that hooping-cough "*must run its course*;" but the truth is, it has no definite course. There is no limit to its duration. Like most diseases, it usually wears itself out, or destroys the life of the child, in two or three months. But, on the other hand, it frequently lasts for nine months or a year, and then ends in an incurable condition of the lungs or brain.

False ideas in regard to the curability of a disease are always to be deplored, for they paralyze our efforts to improve its treatment. If the physician could do nothing to mitigate the severity and shorten the duration of such diseases as hooping-cough, the art of medicine would really be of little value to mankind; and yet such seems to be the general impression. This, however, is unjust to the profession and most cruel to the unhappy children suffering with this disease. Much can be done, and ought to be done, in every case; and I will now proceed to tell you what it is and how to do it.

**TREATMENT.**—In the *first* stage you will not know that the disease is hooping-cough, for there are no symptoms by which you can distinguish it from an ordinary cold on the chest. It will be perfectly proper to treat it as a cold, in the manner I have very fully pointed out under that head (Part I. page 18).

These means will moderate its severity and reduce its inflammatory character.

In the *second* stage, that is to say, after the *hooping* sound is heard, the indications are: 1st, to allay *irritation* of the mucous membrane of the air-passages; 2d, to counteract the tendency to *spasm*; and 3d, to protect the lungs and brain from *congestion*. If I tell you how to accomplish these three indications you will know how to treat the disease.

I. Hot *inhalations* must be taken three or four times a day, for ten or fifteen minutes at a time. The *inhaling instrument* to be used, and the manner of using it, I have fully explained in another part. The *medicines* to be inhaled must consist of a combination of *sedatives* and *emollients*. The following prescription is a very good form:

R. Fluid extract of belladonna— $\text{ʒi}$ .

“ “ conium— $\text{ʒi}$ .

“ “ stramonium— $\text{ʒii}$ .

Spirits of wine— $\text{ʒi}$ .

Camphor water to make  $\text{ʒvi}$ . Mix.

Of this mixture a teaspoonful is sufficient for each inhalation.

The fluid in the inhaling instrument should be a hot infusion of camomile flowers; and to this the dose of the inhaling mixture is to be added.

II. After the irritation has been lessened by the sedative inhalations, half a teaspoonful of *tincture*

or *milk* of *asafœtida* may be added to each dose of the inhalent mixture, as an *anti-spasmodic*. This will generally overcome the tendency to spasm of the glottis, on which all the distress of the coughing fits depends, and meet the second indication.

III. As the quantity of air admitted to the lungs is always reduced greatly below the standard of health, and the quantity of blood remains the same as in health, it follows that if the blood flows into the lungs with the same rapidity, it must gorge and overload them, for it will not pass through until it has been purified by the air. To meet this we require to reduce the rapidity of the circulation by diminishing the action of the heart.

This may be accomplished by the use of green hellebore, (*veratrum viride*), or by *digitalis* or tartarized antimony. For children the two latter are the best, and the following prescription is an admirable form for their administration:—

- R. Tartarized antimony—3 grains.  
Extract of belladonna—4 grains.  
Tincture of *digitalis*—1 drachm.  
Sirup of ipecac—1 ounce.  
Thin mucilage of gum-arabic—3 ounces. Mix.

DOSE.—From half a teaspoonful to a teaspoonful morning and evening, to children from two and a half years upward, for the purpose of attracting the blood to the skin.

*Counter-Irritation* should always be made over

the *chest* and along the *spine* with a mixture of spirits of camphor and olive oil, to which a few drops of croton oil may be added.

R. Spirits camphor—2 ounces.

Olive oil—4 ounces.

Croton oil—15 drops. Mix.

This should be rubbed well into the skin with the hand, and applied night and morning until a *rash* breaks out, after which once a day will be sufficient.

The *bowels* should be kept free by the use of some mild aperient, as *Husband's* magnesia, from half a teaspoonful to a small teaspoonful, dissolved in new milk.

Be particularly careful to keep the surface of the body warm, by putting on soft, warm flannels, and strong-soled boots.

The diet should be of the milk-and-water kind—bread, milk, gruel, porridge, panada, rice, and vegetables, are all proper; but give little meat. If the child seems weak, give it, in addition, a cup of chicken-broth or weak beef-tea twice a day.

Some years ago, it was the custom to give *prussic acid* as a sedative in this disease; but it is a very uncertain remedy, and its administration is always attended with some danger. For this reason it should never be given, except under the eye of a physician. The late Sir William Watson used to place great reliance on a simple mixture composed

of one grain of tartarized antimony, twenty drops of laudanum, and an ounce of water. Of this he gave the child a teaspoonful, or an *eighth* part of the mixture, every evening. A better combination is one grain of tartarized antimony, six drachms of paregoric, and two drachms of sirup of ipecac. This makes an ounce mixture and the dose is a teaspoonful. The camphor and anise seed in the paregoric and the ipecac increase its sedative properties, and help the expectoration.

In very severe cases, attended with violent fits of coughing and prolonged and frequent paroxysms, it becomes necessary to supply *oxygen* to the blood by artificial means. There is no way of doing this so satisfactorily as by the inhalation of the *vitalized* gas; but that, in most cases, is attended with difficulty in young children. Where such is the case, one of the *pastilles* mentioned under the head of Asthma, must be burned in the child's bedroom every night. It is perfectly simple, and will not disagree with those in health, while it performs the double object of supplying oxygen to the lungs at the same time that it fills the air with a soothing anodyne vapor, most grateful to the inflamed air-passages.

Under this course of treatment, whooping-cough soon becomes mild, and gradually disappears, leaving none of those injurious consequences to children's health which so constantly follow the cruel and senseless practice of leaving the disease to "*wear itself out.*"

## CHAPTER VI.

## ON ASTHMA.

THE characteristic symptom of this disease is *shortness of breath*. We never find it absent during the attack, and it is generally present in some degree during the interval between the fits—that is to say, the patient, though comparatively comfortable, can not walk fast or exert himself in any way without experiencing more or less oppression in breathing.

There are many symptoms in asthmatic cases which are common to all forms of the disease, and can not be said to belong to one more than another. When a person has once had an attack he can generally predict pretty certainly the approach of the fit. Usually a *fullness* and *windiness* about the stomach, with a disposition to *yawn*, are experienced immediately before the attack. These symptoms are followed by a sense of tightness and constriction around the lower part of the chest, or by *headache*, *dryness of the nostrils*, and a sense of *chilliness*.

The attacks may come on at any time, but usually occur in the night or early morning, perhaps four paroxysms out of five occur after midnight and before six in the morning. Some suffer the moment they lie down, but it is far more common for the sleep of the early part of the night to be undis-

turbed. Toward morning the patient is suddenly awakened out of sleep by a sense of suffocation and a dreadful oppression and weight on the chest. He sits up in bed, breathing with great difficulty, calls for the doors to be opened and windows raised to give him air. Perspiration generally forms on the forehead, and, in severe attacks, stands out in large drops. The face is anxious, the eyes staring, the lips pale or blue, the extremities cold, and the heart palpitating violently.

The *duration* of the fit is very different in different cases, and at different times in the same case. It may pass off in half-an-hour, or last for days. At length the *tightness* around the chest relaxes, the breathings become longer and more *sighing* in character; the patient begins to expectorate freely, the lips lose their lividity, and sleep comes to the relief of exhausted nature—the attack is at an end.

The reason why asthmatic fits come on so suddenly and pass off so mysteriously, is easily explained: The air-tubes have a muscular coat, which gives them the power of contracting. Whatever irritates the nerves which supply this muscular coat is liable to produce an attack of asthma. In nervous people, and in those who have a very irritable mucous membrane, this liability is increased tenfold. Coal-gas smoke, or the aroma of flowers, will produce it in one and not in another. A severe cold, or dust, will occasion it in persons who suffer no inconvenience



whatever from the other causes. The *irritation*, from whatever cause it may arise, produces the spasm; and until that spasm relaxes, very little air can get into the lungs; and all the distress the patient experiences arises from the want of air. Any mechanical obstruction in the air-tubes would produce the same distress without the spasm being present. The spasm, like cramp in other points of the body, comes on often without any apparent cause, and, like it, may continue for several hours, and then pass off in an instant. Whatever, then, *irritates* the pulmonary nerves may produce asthma; and whatever will *soothe* them will relax the spasm and give the patient relief.

But it must not be supposed that all cases of asthma terminate with the relaxation of the spasm. Wherever high irritation of the mucous membrane exists there is always more or less swelling, which takes place at the expense of the air-tubes, and consequently diminishes their size. By the swelling and puffing up of the lining membrane we are often unable to breathe through the nose, and yet there is no spasm. The same takes place in the lungs in cases where the spasm does exist, and may continue long after it has passed off. Where such is the case, the relief is only partial; and it is only after a copious discharge of *mucus* takes place that the swollen membrane subsides and allows the air to enter again freely into the lungs.



Then again, in *Dry Asthma* there is generally considerable thickening of the mucous membrane lining the air-tubes, which permanently diminishes their size and prevents a complete restoration of health. So long as this is allowed to continue the patient must always suffer from oppression, and be liable to asthmatic attacks.

There are several *kinds* of asthma, and to perfectly understand the disease it is necessary to explain the peculiarities of each form:—

NERVOUS ASTHMA.—This is probably the *simplest* form of the disease, and is caused by irritability of the mucous membrane of the air-passages. The attacks come on *suddenly*, without any warning, and pass off again in a few hours without much *expectoration*. It occurs at all ages, and in both sexes, but is much more common in nervous women. The attacks may be produced by any thing which quickens the circulation. Sudden *fright* is a very common cause. It also sometimes arises from powder of ipecacuanha, the *smell* of cheese, or the *smoke* of a candle or lamp when blown out. Indeed, almost any influence that quickens the circulation, or excites the mucous surfaces of the air-passages, may produce the asthmatic fit. I have known nervous asthma of the severest description to be produced by different animals—*cats*, *dogs*, and horses, and by even the smell of a stable. In one case, a lady could not ride on horseback, or even drive in an

open carriage, without having an attack ; and I have met with many persons who would always know from their breathing if a cat was in the house.

HUMORAL ASTHMA.—This form of the disease is characterized by the discharge being *thin* and *watery*, and flowing in large quantities. The attacks come on as a cold in the head, and rapidly extend downward, until the whole mucous lining of the throat, larynx, windpipe, and bronchial tubes, is involved in one continuous irritation. There is usually great oppression in the chest, with wheezing ; and the nose is so *stuffed* that the patient is compelled to breathe through the month. The discharge resembles the white of raw eggs, covered with froth, and often amounts to several pints in the twenty-four hours. It is most common in persons above the age of 45 years, but occurs at every age. Between the attacks those afflicted with this kind of asthma are always more or less *wheezy*, particularly when walking or taking any exercise that quickens the circulation.

If the reader will turn to my account of *humid* bronchitis, he will perceive that, except the fit, the symptoms, and even the character of the expectoration, are precisely the same in both diseases. That in fact humoral *asthma* is nothing more than humid or humoral *bronchitis*, with the addition of the spasm which constitutes the fit. Two persons may suffer an attack of cold, which settles on the chest,

and produces bronchitis. In one it will remain a mere humid bronchitis, while in the other it becomes *spasmodic*, and takes the name of humoral asthma.

**DRY ASTHMA.**—The most serious form of asthmatic disease, and the most common, is called *dry asthma*. It comes on as an ordinary case of dry bronchitis. A person, to all appearance in perfect health, perceives that his breath is *shorter* than that of other people on exertion, and that every morning he raises, with a good deal of *rasping*, a small particle or two of pearl-gray or bluish-colored mucus. The quantity of this matter gradually increases, and is attended by more frequent efforts to clear the air-passages. This condition continues for months, and it may do so for years; but sooner or later—generally from a fresh cold—spasmodic contraction of the air-tubes takes place, and a violent attack of asthma occurs. Once fairly set up, the fits occur from time to time, generally with every fresh cold.

This again is only *spasmodic dry bronchitis*, and shows you that there are the same forms of asthma as there are of bronchitis. Both diseases are produced by the same causes—*cold*, *smoke*, and *dust*—and require precisely the same treatment.

**HAY ASTHMA.**—This form of asthma is by some called *hay fever*, and by others *rose cold*. These names have been applied because the smell of new-mown hay is one of its most frequent causes, and the aroma of *roses* another. But it is not confined

to these, and may be produced by many other and dissimilar influences. This corresponds with *influenza*, and always begins its attack as a "*crying cold*." First, the lining of the nose, throat, and eyelids *itch* and *burn*, then the patient is attacked with *sneezing*, after which a *scalding water* runs from the nose and eyes. These symptoms are speedily followed by *cough*, *oppression* on the chest, *wheezing*, and *want of breath*.

It always begins as an influenza cold, and then passes to the chest. Many suffer from it dreadfully during the months from June to August, but get better as the autumn approaches.

EMPHYSEMA.—When *dry asthma* has existed for several years, we often find, on examining the lungs, that changes have taken place which no skill on the part of the physician can ever entirely remove. From repeated attacks the air-cells of a part of the lungs become *enlarged*, and not unfrequently *ruptured*, so that several cells come to form one cavity. I need not say that neither medicine nor surgery affords any means of restoring the obliterated cavities or reducing the dilated ones. This condition we call *emphysema*. It is simply asthma, with a rupture or dilatation of the air-cells. In this form the shortness of breath is *always* present, and there is much greater liability to the recurrence of the fits; indeed, those afflicted with emphysema are never entirely free from asthmatic *wheezing*. They

can not lie down with comfort. A full meal, by distending the stomach, occasions great inconvenience. In many cases the INSPIRATION of air is much freer than the *expiration*. There seems to be less obstruction to the entrance of air than to its expulsion. Portions of mucus form in the bronchial tubes and act as *valves*. The air, in passing out, blows these *valves of mucus* across the tubes, thereby obstructing them. In persons who have died of asthma, valves of this kind have been found hanging to the sides of the windpipe, and in the bronchial tubes, possessing almost the tenacity of *false membrane*. To make my meaning clearer, I will give you a very simple illustration: Suppose we have half-a-dozen little india-rubber bags, attached by short, tubular stems to a larger tube, and that six cubic inches of air will just fill them. Now, when these are filled they resemble a cluster of air-cells. If we force six cubic inches of air into them, and then expel six, no injury would result; but if we force in *six* cubic inches, and (owing to the tubes offering an obstruction to the return of the air), can only expel *five*, and continue to do so, in a short time they become swollen to two or three times their former size, and in the end will *burst*. This is a mechanical illustration, but not a whit more mechanical than actually takes place in the lungs of many asthmatic people. It is in this way that emphysema is produced, the rupture and dilatation of the air-cells taking place, because more air is drawn

in at an *inspiration* than can be expelled at a *breath*.

Besides these *five* distinct kinds of asthma, there are many other conditions of the lungs to which the name asthma is *sometimes* applied; but as they are comparatively *rare*, it is not necessary to detail their symptoms in a *popular* work of this character.

I have told you that asthma is a very erratic disease, and is ever changing the character of its attacks. In one case it comes on only after a severe cold, or violent exercise, or some distinct exposure to local irritation, while in another the fits occur without apparent cause or warning. In one person it manifests itself in *slight* attacks every *few days*, while in another only *one* or *two* attacks occur a *year*, which are of much greater severity and longer duration when they do occur. We can not satisfactorily account for some of the peculiarities which manifest themselves in this disease. For instance, I have known persons who could only sleep in a certain *position*, and any deviation from it would be sure to bring on a fit. Others that could sleep on one side of a house, and not on the other. Most asthmatics breathe best in *pure* air, but now and then we find one who can not escape an attack outside the *atmosphere* of the city. Of course each place has its atmospheric peculiarities, but it is not always possible to avoid the exciting cause, for the simple reason that it can not always be discovered.

The patient should, if possible, do so, as it materially affects the success of treatment.

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## CHAPTER VII.

### TREATMENT OF ASTHMA. .

THE failure of the treatment of this disease by medicines administered through the stomach, has created a profound conviction that it, like consumption, is beyond the reach of remedy. The consequence is that physicians and patients too generally content themselves with a mere effort to *relieve* the attacks, leaving *untouched* the root of the malady in the lungs.

Now clearly if we can not cure asthma through the stomach, we can not cure chronic bronchitis, for asthma is nothing more than *spasmodic* bronchitis. Does not this fact convince you that the treatment by the stomach is wrong. Bronchitis is one of the simplest forms of lung disease, and ought to be amenable to *stomachic* treatment if any lung disease would.

The experience of physicians and patients has abundantly proved that neither consumption, bronchitis, nor asthma is ever cured by the ordinary rou-



tine ; and, as a consequence, the opinion has grown up that lung diseases are *incurable*.

But *why* must they be incurable ? How do you know that it is not the fault of the treatment ? Upon what grounds do you assume that the ordinary treatment is *correct* and the best that could be adopted ? Why may the failure not arise from the use of wrong medicines or their improper application ? Were we to treat *fevers* upon a *wrong* principle, would we not fail to cure them ? We might as well assume from our failure that they, too, were incurable. *Ague* was seldom cured before the discovery of quinine ; *aneurism* was seldom cured before the discovery that we could successfully *tie* the arteries ; nor was *small-pox* prevented before the discovery of *vaccination*. The people used to think all these diseases *incurable*. Twenty years ago we gave *mercury* in almost every disease, and seldom allowed a patient to escape without puncturing his veins and letting out a portion of his *blood*. This was considered *right* then, and yet we *now* know that it was so *wrong* as often to cost the patients their lives.

This is a digression from my subject, but I feel that it is on a point of very great importance. It is only by informing the public of these things that we can ever hope to reform abuses in medicine.

A disease may spring from so *deep-rooted* a vice in the system as to defy all medicine ; but asthma only springs from irritability of the mucous mem-



brane, or, at the worst, from a chronic inflammation of the lining of the air-tubes. A disease may be so *rapid* in its progress that there is not sufficient *time* for medicine to act ; but asthma is a very *slow* disease, and only ends fatally after *years* of suffering. If we look closely into the *nature* of the disease we find nothing in the *causes* which produce it, or in the *changes* which it effects in the lungs, to justify a belief in its "*incurability*." In most cases we find nothing beyond *thickening*, and in many, only *irritability* of the mucous membrane.

In *emphysema* we have, it is true, dilatation and rupture of the air-cells, but these are *consequences*, and comparatively rare ones, of the long continuance of asthma, and do not apply to ordinary cases.

These facts justify the conclusion, that the *failure* to cure asthma is solely due to the injudicious manner in which it has been treated. It is a purely *local* affection, and yet has never been treated as we treat local affections of the mucous membrane of other parts.

If we have a chronic inflammation of the *eye*, the *throat*, the *stomach*, or the *bowels*, we always make direct applications to the affected part. As *success* is the proper test in medicine, and this treatment is *successful*, it is safe to regard it as *correct*. Certain it is that we should fail to cure these diseases by any other method. Now, if we can cure *irritability* and inflammation of the mucous

membrane of the eye, throat, stomach, and bowels, by *local* applications, can we not cure irritability of the mucous membrane of the *lungs* by the same means? It is surely absurd to divide this membrane into *inches*, and apply our treatment by *measure*, totally varying it in principle according to certain arbitrary divisions. Nothing is clearer than that which is good for the mucous membrane of the eye is equally good for the mucous membrane of the throat; and what is beneficial to the throat can not but prove efficacious to the windpipe and lungs.

From this reasoning it will be understood that I regard it as indispensable that asthma should be mainly treated *through the lungs*, and not through the stomach, as heretofore.

Had we no *facts*, we might reason from *analogy* alone with great force in favor of a *local* treatment. But what says *experience*? Why, that the only prompt *relief* asthmatics have ever obtained has been derived from the direct application of remedies to air-tubes and cells of the lungs! Inhaling the fumes of "nitre-paper," smoking *stramonium*, and the more recent inhalation of ether and chloroform—all simple palliatives—have afforded a thousandfold more comfort to the afflicted than all the nauseous mixtures ever taken into the stomach.

Now, if this be true of *palliatives*, which are intended merely to allay irritation and relieve the

distress in breathing, how *curative* must be a thorough treatment administered in the same manner, and applied directly to the seat of the disease. Something more is required than merely to relax the spasm of the air-tubes and relieve the breathing. The *irritable* and *inflamed* mucous membrane must be *restored to health*, or the attacks will return again and again until the disease finally ends in hopeless *emphysema*.

The only question is, *have* we any means which will restore the mucous membrane to health? If we have, then we can cure asthma, for, in most cases, it solely depends on bronchial disease.

It is the common practice of certain medical men, who desire to disparage the *inhalation* treatment of lung diseases, to meet its alleged cures of *consumption* by the assertion that they must have been old cases of chronic bronchitis which were "*mistaken for consumption*." Now (although the supposition will be disproved by the clearest evidence when I come to speak of consumption), what is this but an admission, that by medicated inhalations we do cure cases of *chronic bronchitis* of so bad a character as to be mistaken for consumption? If the treatment will do this, then it will remove the *root* of asthma, which, in the majority of cases, is only a *mild*, chronic bronchitis.

You see, therefore, that even the pretended opponents of this treatment, in their zeal to deny it the

merit of curing consumption, actually concede to it the power of effecting far more than we require to cure asthma; for certainly none, save the *worst* forms of chronic bronchitis, could possibly be "*mistaken for consumption.*"

Such then is the *theory* upon which I base my treatment of asthma. Its application is easy and free from most of the disagreeable accompaniments to the *taking* of medicines by the stomach. The patient is required to use the *inhaling instrument* I have described in another part of this book, morning and evening, for fifteen minutes at each time, and at night to sleep in a chamber medicated by one of the *pastilles* to be presently described.

If the mucous membrane is very *irritable*, which will be known by the frequency and troublesome character of the cough, and the frothy nature of the matter expectorated, the water in the inhaler must be as *hot* as the patient can bear it, and the medicines used the same as I have ordered in *hooping cough*. In *old* cases of *dry* asthma, with very slight and difficult expectoration, a combination of *sedatives*, *anti-spasmodics*, and *expectorants* must be employed until this is overcome. *Chlorine* and *oxygen*, in the form of *chloric acid*, or liberated as gases, are the best *alteratives* we possess in *chronic* diseases of the mucous membrane. The oxygen purifies the blood and imparts tone and vitality to the entire system, while the chlorine subdues the

morbid sensibility of the nervous system. They must not, however, be commenced too soon, or employed in too great strength. Every thing depends on the judgment with which they are adapted to the case. If they fail, it will be because the disease has gone too far, or they have not been properly administered.

The "*pastille*" is one of the most important agents employed by me in the treatment of bronchial and pulmonary cases. It is a *metallic* cone filled with ingredients which liberate *oxygen* in combination with the fumes of *datura stramonium* and *Indian hemp*. It combines the *three* actions: *alterative*, *anti-spasmodic*, and *sedative*. The following illustration shows its form and the manner of its combustion:—



The directions for its use are to ignite the *point* of the cone with a match, and then place it on a plate on the floor. The patient should sit *before* it, holding the head over the burning pastille, and inhale the fumes well into the lungs. About *two minutes* are all that are required for its combustion. The gas is then retained in the room, and the patient

*sleeps* in it. The best time for its use is at *bedtime*, though, if required, it may also be used at any time in the day. One pastille is quite sufficient to medicate any ordinary bedroom. The vapor is not in the least disagreeable or injurious to those in health. It increases the *oxygen* in the air, and renders it *soothing* and *anti-spasmodic*. It will generally control a violent fit of *asthma* within *five minutes*, and insure comfortable rest to those otherwise unable to sleep except in a chair. In *bronchitis* it acts as a powerful *expectorant* and *sedative*, unloading the air-tubes of mucus and soothing the inflamed membrane. In *consumption* and all forms of *chronic cough*, it produces great relief and substantial benefit, increasing the *oxygen* supplied to the lungs, *purifying* the blood, *promoting* expectoration, and *allaying* bronchial irritation.

They are applicable to all forms of *chronic* disease of the air-passages and lungs—asthma, bronchitis, catarrh, and consumption—and I have no hesitancy in recommending them to my professional brethren as a remedial agent of very great efficacy.

The use of these *pastilles* has hitherto been wholly confined to my own practice, because, being of *special* manufacture, it has not been possible for medical men either to make or procure them. I have, however, no wish to limit their usefulness, and hence have authorized Mr. E. R. Hartnoll, chemist, 7 Tichborne Street, Haymarket, London, and 2



Place Vendome, Paris, to supply them to the profession and the public. Mr. ———, chemist, ———, is Mr. Hartnoll's agent for the United States.

I have mainly dwelt on the remedies to be employed through the lungs, because on these *cure* depends; but it must not be supposed that the state of the general health is to be neglected. In many persons the state of the stomach has much to do with inducing the attack. *Flatulence* must be guarded against by the use of *tonics* and *carminatives*. If there be *acidity* of the stomach it must be corrected by *alkalies*—as soda and potash—and the bowels regulated by mild aperients, as *magnesia*, or any of the various pills which may be found to agree. Lastly, it is a matter of the utmost consequence to protect the surface of the body from cold, by putting on thick, warm flannels throughout. Disregard these things and you will be continually having relapses either from nervous irritability or fresh *colds*.

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## CHAPTER VIII.

### THE RESULTS OF THE VAPOR TREATMENT.

THE views I have advanced in the preceding pages must be, I think, conclusive to every logical mind.



It is, nevertheless, satisfactory, in this age of *theories*, to be able to point to their practical application and successful working.

The method of treating diseases of the air-passages and lungs by medicated and oxygenated vapors is no longer a novelty or an experiment. Since my introduction of it in 1857, I have demonstrated its curative efficacy in many thousands of cases, embracing every form of pulmonary disease. In this city, and throughout the Union, witnesses to its success abound on every hand. The statistics of New York, during the period of my former residence here, show a diminution of fully *thirty per cent.* in the mortality from consumption alone. My practice at that time was so great as to break down my own health, and compel me to retire for a time from its heavy labors.

In the year 1864 I introduced my system into England, and I am happy to have at hand some very recent evidence (November, 1866), taken before the highest judicial court of the kingdom, to show that its success was equally great there.

The following testimony was brought out in an investigation demanded by myself, for the vindication of my theories and practice. It is a remarkable and most significant fact that, while hundreds volunteered their testimony in its favor, not one person, out of 3,000 treated, could be produced to say a word against its efficacy.

I shall leave this remarkable testimony to speak for itself, merely adding that many of the witnesses are gentlemen of the highest respectability and position, and that on their evidence the jury rendered a verdict in favor of my practice.

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TESTIMONY taken in the Court of QUEEN'S BENCH, Westminster, BEFORE the LORD CHIEF-JUSTICE of ENGLAND and a SPECIAL JURY.

### CASES.

#### BRONCHITIS, CATARRH, ASTHMA, AND CONSUMPTION.

I.—MR. GEORGE ROBINSON, *sworn*.—*Examined by Mr. COLERIDGE.*

I reside at Chalfont, St. Giles. Some years before 1864 I had suffered a good deal from bronchitis. I had been under different local doctors. They did not give me permanent relief. In the autumn of 1864 I was again suffering from bronchitis; it was a serious attack. I was very weak indeed. I felt altogether ill. In November, 1864, I consulted Dr. Hunter; he did me good, most undoubtedly. There were *streaks of blood* in the phlegm I expectorated. At the end of four months I gradually discontinued the treatment.

*Lord Chief-Justice Cockburn*—You remained

under his treatment four months?—Yes; at the end of four months I gradually left it off. I continued the inhalation but once a day or so; it was gradually left off, not suddenly. I have been better ever since. I have derived permanent benefit from it. I had a little of his attention last winter. Dr. Hunter led me to expect I might want a little attention last winter. I was attended for two or three weeks, when I got better, and have been better ever since. I am satisfied with what Dr. Hunter has done for me, very much so; and with the charges he made.

*Cross-examined by Mr. KARSLAKE.*

I understood I was suffering from bronchitis, with *tubercular deposit*. After the inhalation I took a small quantity of some medicine. During the winter of 1864 I inhaled three times a day, and burned a *pastille* when I went to bed. I saw Dr. Hunter once a fortnight all through the four months. I think I was with him four months. I was better in the summer, especially in the latter end of the summer. I have suffered from bronchitis in the summer time. I generally had it most in cold weather. I went again from the cough last winter, about a week after Christmas. Have not been to him since then. Am not inhaling now. Do not suffer now from bronchitis at all. I may have an occasional cough. I consider myself cured. I do not intend

to tell the court that I never cough—I consider myself comparatively cured. When I went on the second occasion, I think I took some medicine—I am not certain. I had a cough mixture. I was to *use as little of it as possible.*

*Lord Chief-Justice Cockburn*—Comparing the state you are in with the state you were in when you first went, do you think your money has been thrown away?—Not at all, my lord.

II. MR. HORATIO NELSON HORNBY, *sworn.*  
—*Examined by Mr. COLERIDGE.*

I live near Swindon, and am chief clerk in the locomotive department of the Great Western Railway. In 1864 I had a bad attack of bronchitis, which settled upon one lung. I had consulted the local medical men there without much benefit. From seeing one of Dr. Hunter's books, I consulted him in September of that year. He examined me very carefully, and treated me from September 23d to Christmas. I got very great benefit from his treatment. I was very weak indeed when I went to Dr. Hunter, and I believe I had the usual remedies, which did me a great deal of good—*inhalation, embrocations, and pastilles.* By Christmas, 1864, I was very much stronger than when I consulted him. My general health has been much better to the present time.

*Lord Chief-Justice Cockburn*—You got rid of the affection of the lungs?—Yes.

*To Mr. Coleridge*—I have had colds since then, and have had recourse to Dr. Hunter's remedy, and always with very great success. I am satisfied with what he has done for me; very much so; and with what I had to pay for it.

*Cross-examined by MR. KARSLAKE.*

The symptoms of my disease were shortness of breathing, profuse perspiration on the least exertion, and great weakness, coughing, and expectoration. It came on suddenly; I took a violent cold. The violent cold did not continue more than three or four days before these aggravated symptoms set in. That was the first time I had these symptoms. I never had been told before this illness that my lungs were affected. Dr. Hunter told me these things were due to the state of the lungs, and also other professional men *previous* to that.

*Lord Chief-Justice Cockburn*—What professional man had told you so?—The country practitioner at Swindon told me my lungs were *affected* from the effects of bronchitis.

*To Mr. Karlake*—Before I went to Dr. Hunter I was under the gentleman at Swindon about *three months*. I then consulted a physician in London, under whom I was *six weeks*. He also told me my

lungs were affected slightly. I can not tell you what it was. This disease of the lungs had been in progress *four or five months* before I saw Dr. Hunter.

*Lord Chief-Justice Cockburn*—What were the symptoms under which you were laboring when you saw Dr. Hunter?—Shortness of breath, great weakness, causing a great deal of coughing in the morning, with expectoration slightly *streaked with blood*, and a profuse perspiration on the slightest exertion. I could not walk up-hill at all.

*To Mr. Karlake*—A very great deal of irritation in the throat, and coughing. I also suffered very much from ulcerated sore-throat; I had done so before on several occasions, accompanied with cough. I had generally a severe pain in my chest, on the left side. I was told my right lung was affected, for which I had been prescribed iodine. I do not mention the name of the physician. Those symptoms continued, when I consulted Dr. Hunter.

*To Mr. Karlake*—I still had a pain in the back. When I consulted Dr. Hunter, I came backward and forward from Swindon once a week regularly for two months. Within a fortnight after consulting Dr. Hunter I derived benefit. The pain had decreased; my chest was relieved by the inhalation, and I could expectorate freely without exertion.

*Lord Chief-Justice Cockburn*—How soon was that?—Within a fortnight.

*To Mr. Karlake*—The cough was loosened and

the expectoration more easy; the throat got better after having a part of the uvula removed. Dr. Hunter did that. It was elongated. I do not think I could rightly remember how soon after it was that the pain in the back and chest went away; it went entirely in the course of three months. I am rather short of breath now. I was not always rather short of breath; I presume that is from the lung being dried up. There is no pain there now. I do not cough except occasionally. I ceased to consult Dr. Hunter at Christmas, 1864.

III.—MR. LEON CONTANSEAU, *sworn*.—*Examined by* Mr. HUME WILLIAMS.

I have been living at Saint Alban's Road, Norwood, but am now staying at No. 13 Park Road Terrace, Forest Hill. I lately held the office of Professor of French at Addiscombe College, and Government Examiner for candidates for commissions. I know Dr. Hunter, and have consulted him professionally. I was suffering from palpitation of the heart, and from debility to such an extent that I could hardly walk any distance without being out of breath. I also broke into sweats, and had tightness on the chest, with expectoration, not much, but which I did not like. I had a little hacking constant in the throat, which I can hardly call a cough. I had suffered four or five months before I went to



Dr. Hunter. I had occasionally, during that period, consulted other medical gentlemen before I went to Dr. Hunter. I went to him first at the end of November, 1864. I saw him at his own house. I told him what I was suffering from. I stripped, and he examined my chest very minutely. He told me that the upper lobe of my lungs was slightly attacked. He gave me an apparatus, with a gutta-percha tube at the top, and I had to inhale three times a day—in the morning, the middle of the day, and the evening. He also gave me a tonic to be taken each time after inhalation. He said that he hoped in a month or two I might be cured. The very first week in which I began inhalation I felt very great relief. I was to inhale fifteen minutes at each inhalation. He told me to eat as much meat as I could. I had no appetite and could not eat then. He ordered me French light wine. He told me never to be without flannel, and to take great care not to catch cold or get wet. I followed out his directions punctually, and became so well that I have since been able to attend to my duties without difficulty. I gained from eighteen to twenty-one pounds weight in three months. I first began to feel my palpitation disappear little by little; then I recovered my sleep, which I had previously lost. I recovered also my appetite; the sweats disappeared; pain in my legs, from which I had suffered, disappeared; so also did the tightness in the chest. The

hacking in my throat went off too. I continued the treatment, notwithstanding my improvement. I left it off at the end of three months, afterward using the inhalation occasionally when I did not feel quite so well. Dr. Hunter made many examinations of me. He supplied me with apparatus and medicine. I could go to his house every day if I chose. My wife was also ill, and Dr. Hunter attended her. My health is now generally good. Now and then, when the weather is bad, I do not feel quite so well.

*Cross-examined by Mr. STEPHEN.*

Before I went to Dr. Hunter, I consulted Dr. Davis, of Finsbury Square. He is attached to the London Hospital. About two months before I went to Dr. Hunter, Dr. Davis examined me. I paid him only one visit. He said that he would give me something that would relieve me. He gave me a prescription. I saw Dr. Duke, of Norwood, about Christmas last, for quite a different complaint. I saw no one but Dr. Davis for this complaint before Dr. Hunter, and no one since. The expectoration was different from what I had been accustomed. Palpitation came first. My health had been generally good until I had this complaint. I was fifty-two years of age last April. Dr. Hunter said the upper lobe of both lungs was slightly affected. I inhaled at my own house only, and

always with the same apparatus. I went to Dr. Hunter once or twice a week. He examined me about once in every three weeks. I have been to him occasionally since the three months. He gave me something in the bottle to inhale, and an embrocation. I had lost flesh quickly before I went to him, and gained it quickly after I went to him. When I went to him I weighed 133 pounds, and after three months I weighed 151. My weight, when in good health, before, had been 148 lbs. Except telling me that the upper lobe of my lungs was affected, Dr. Hunter never told me what was the matter with me.

IV.—MR. JOHN GEORGE MEYER, *sworn*.—  
*Examined by Mr. HUME WILLIAMS.*

I am a commercial broker, and live in New York. I am now staying at 19 Camden Square, Camdentown. I know Dr. Hunter, and have been in the habit of consulting him. I first consulted him on the 21st of February, 1863. I was complaining of consumption; cough was incessant. I had hectic fever, night-sweats, and expectorations of mucus and blood, as much as a pint and a half in one day. I suffered also from general debility, emaciation, short breathing, and sores in the mouth. I could walk only with great difficulty. One day I dropped down in the street from exhaustion. I had been under the medical treatment of Dr. —, of New York,

from the beginning of October, 1862, until a short time before I went to Dr. Hunter. When I consulted Dr. Hunter he was practising in New York. First of all he examined me, and then he gave me an inhaler, and a solution to put into it, with hot water. He told me to use the water as hot as I could without breaking the vessel, and to inhale three times a day before meals, once before each meal. I was to inhale each time for 15 or 20 minutes. I also went to Dr. Hunter's house every day for several months. I inhaled there each day, but only for a few minutes. I inhaled there camphor vapors, and oxygen as a separate operation; first the camphor vapors, and then the oxygen. I could not stand camphor for more than a few minutes—in my opinion no one could. There was a room specially fitted up for inhaling. There was one inhaler for the camphor vapors, and one for the oxygen. It was a sort of copper vessel, covered over, and with a small aperture, that is, a small pipe to guide the vapor. I stood over it, and inhaled. Dr. Hunter also gave me an embrocation to rub on my chest, to produce an eruption and counter-irritation. I rubbed it on each side of the chest alternately, so as not to have both sides sore at the same time. He told me also that I was to be very particular about my diet, and take good nutritious food, to live regularly and well, to keep my chest warm, and to be very careful. He ordered me to take a

medicine, which he said was a compound or solution of iron, a teaspoonful in a wine-glass half-full of water after each inhalation. The relief, after the first two or three days, was immense. I never would have believed it. First of all, the sores in the mouth disappeared; the *hectic fever* and the *night-sweats* ceased after three or four days. I speak from recollection, my illness being impressed on my memory. The cough was less violent; I could sleep better at night, and the expectorations were less; my appetite improved. I felt stronger, and then began to get a little stouter. I continued the treatment, more or less, until I left New York, in May last. I did not latterly inhale more than once a week. I came to feel tolerably well about twelve months after I first saw Dr. Hunter. I began to feel almost entirely well, except a little weakness in my lungs, which is all that now remains. I have seen a great many other patients at Dr. Hunter's. I have consulted him since I arrived in England, and have been treated medically by him. He has given me solutions to use in the inhaler, as in New York, and a tonic after each inhalation, and a cough mixture to be used occasionally, and pastilles to be burnt in my bedroom when I go to bed.

*Cross-examined by Mr. STEPHEN.*

I have no objection to be examined by Dr. Ben-

nett on behalf of the defendant ; but I do object to be examined now.

I began to feel ill in July, 1862. I was then living in New York. My illness began with cold chills in the summer. I had no medical advice until October, 1862, and then I went to Dr. —. He attended me until February, 1863, and from that time until last May I have been under Dr. Hunter's treatment. I left off regular inhalations about twelve months after I had seen Dr. Hunter, and after that I inhaled occasionally when I considered my symptoms required it. Dr. Hunter attended me personally two or three months. I began to feel really better and to get my strength back about *six weeks* after I first consulted Dr. Hunter. Dr. — treated me by giving me continual *opiates* for stopping the cough, and *quinine* and also *cubebs* to stop the irritation of the cough ; and other things were given to me. I used to get better one day and worse the next. The only relapses after going to Dr. Hunter were when I did not take care of myself ; but the whole tendency was for the better. Dr. Hunter did not tell me I had consumption, but I heard it from a friend of mine. Dr. Hunter may have told my wife. I knew very well I had severe disease of the lungs, by the symptoms which I have described. I do not think I ever asked Dr. Hunter what was the matter with me. I suffered so much from cough, fever, debility, and expectoration, that there was no neces-



sity for me to ask. Dr. Hunter did not tell me what it was I suffered from. I asked no questions. I went to see Dr. Hunter after my arrival here, because I did not feel well. I had pain in my chest, and occasionally a cough. I lived in New York for thirteen years. It is a very cold place in the winter. Dr. Hunter told me to go to his house whenever I liked. Dr. Hunter lived in Broadway, about three-quarters of a mile from me. I used to go to him generally between three and four o'clock. I attended to my business in the afternoon, as well as I could. I often went in a carriage, because I could not walk. Dr. Hunter told me it was *oxygen* I inhaled. That was through a bottle filled with water, and a pipe going into it. It was only at his house I took this, about ten whiffs at a time. That I did only for the first two months, and I went on with the *camphor vapors* at his house for two or three months. I did not see the oxygen prepared, but I was told by Dr. Hunter it was oxygen. I do not know what the inhalations were at my own home. They were changed frequently, according to my condition. He supplied the medicines himself. When the weather was very rough I stayed at home two or three days at a time, but when fine I walked out and attended, as far as I could, to my business. Dr. Hunter examined me the first time I went there. I stripped to my waist, and he examined me with an instrument which, I believe, is called a stethoscope.



V.—EDWARD MOUNCEY, *sworn*.—*Examined*  
by Mr. COLERIDGE.

I reside near to Uxbridge. In the month of August or the autumn of 1864, I consulted Dr. Hunter for asthma. I had been suffering from asthma some time before I consulted him. I had been seriously inconvenienced by it; so much so that I did not sleep at night without getting up to use some means of relief. I had consulted other doctors, but I had not much confidence in them, and no expectation of their being able to relieve me. I was under treatment by Dr. Hunter I should think six months; and occasionally pursued his system after that. I pursue it now if I catch cold. I was regularly under his treatment for six months, and have used his apparatus from time to time since. I have found very great benefit from it. He stripped me, and examined me by the stethoscope, and treated me after a careful examination. I had read his book.

*Cross-examined by Mr. KARSLAKE.*

I found out that he asserted he could cure people. I had derived an impression, from my conversations with medical men, that asthma was a disease that was rather to be patiently borne and submitted to. I had submitted to other treatment for asthma; but it was nothing of consequence. I have no idea

what it was. Dr. Hunter, I have no doubt, gave me some inhalent of a very similar description to the one which has been described in the evidence this morning. I have no knowledge what I took, except that I asked Dr. Hunter occasionally what it was, and he told me, though I can not charge my memory with it. I can not recollect what he told me, except that there was oxygen in every thing I inhaled. He did not tell me how much, or how it was produced.

*Lord Chief-Justice Cockburn*—You could hardly expect that he would do so.

*To Mr. Karlake*—I remained under his care, I should think, six months. The charge was five guineas a month, paid at the beginning of the month. I had only one inhaler; but I have used others at Dr. Hunter's house. I inhaled three times a day during the first part of the time. I do not remember that, during the six months, I diminished it to a considerable extent.

During the winter of 1865 I do not think I inhaled again—not regularly; I might occasionally, if I caught cold. The six months' attendance began in September, and ceased about March. That was continuous. I can hardly say I consult Dr. Hunter now; I do not require to do so. I like to have a supply of his medicines by me. The terms are now very much left to myself, and depend on how often I get fresh medicines from him.

VI.—MAJOR HUGHES, *sworn*.—*Examined by*  
Mr. COLERIDGE.

I am a retired major in the Indian army, on the Bengal establishment. I have been subject to bronchitis for ten years. I have consulted some of the most eminent medical men in London. They did my bronchitis not the slightest good. I first consulted Dr. Hunter on the 26th of September, 1864. He treated me by inhalation—some kind of medicated vapor. It was not exclusively inhalation; occasionally medicine through the mouth and stomach, as I required it. It was chiefly inhalation. His mode of treatment improved my bronchitis. In five days less than one month after I had consulted Dr. Hunter I had gained *nine* pounds in weight.

*Lord Chief-Justice Cockburn*—How as regarded the bronchitis?—The irritation was very much relieved, my lord.

*To Mr. Coleridge*—After two months I had gained *seventeen* pounds, with corresponding strength and health. At the termination of three months and eleven days I had gained *twenty-one* pounds, which was the maximum of my increase. During this time the bronchial affection continued very much better. Before that I had been in the habit, for eight or ten years, of being almost choked at night with mucus, which mucus was *streaked with*

*blood.* The secretions became much less, and the irritation in the throat considerably alleviated and palliated, and I had rest at night, sleep undisturbed throughout the whole night, whereas formerly I was coughing all night. When I first consulted Dr. Hunter, I could scarcely walk half a mile to save my life; at the end of two months I used to take a four or five miles' walk with great pleasure. My cough or bronchitis has never been radically cured; there was always remaining a little hacking and irritation about the throat, but it was so reduced and palliated that it was really little or no inconvenience. I caught a violent cold on the 9th of this month, which threw me back again; it came on again slightly. Up to the 9th of the present month it continued better. I placed myself under him again last Monday week for this fresh cold. I am getting fast better in the course of a week—a great deal relieved. I paid him a guinea on the first consultation and five guineas a month afterward, he being willing to supply me with medicines, instruments, and so on; and I was to call on him whenever I chose, and as often as I chose. He examined me most carefully with a stethoscope.

*Cross-examined by Mr. KARSLAKE.*

I went to him on the 20th of September, 1864. I left India twenty-two years ago. I should not think it right to mention the names of medical men

I have consulted, unless I was forced to do so; it would be a most invidious thing to do, because they did their utmost to cure me, and perhaps it was not their fault at all. It might be the fault of my own constitution; and to say any thing before the Court regarding them would be most invidious. I am living at No. 6 Princess Street, Hanover Square. I had consulted medical men, before I went to Dr. Hunter, for four, or five, or six years—several of the most eminent men in town on bronchial complaints. When I went to Dr. Hunter I was so unwell that I could scarcely walk. I took tonics occasionally, but the chief thing was the inhalation. I was to live well, eating plain food, and to drink two or three glasses of wine, no more—dry sherry. In three months and eleven days I increased twenty-one pounds. The weight did not continue the same to a pound or two; sometimes more, sometimes less. Between the summer and the winter it fell off again. I am less by about *seven* pounds than I was when I had increased *twenty-one pounds*.

*Lord Chief-Justice Cockburn*—That is a clear gain of fourteen pounds from the commencement.

*To Mr. Karslake*—I have no knowledge of medicines; I can only speak of their effect. It had a soothing effect, and was very pleasant to the taste also. Before I went to Dr. Hunter I had taken cod-liver oil, but *not under him*. One of the most eminent men in town told me it was poison, and I had

better not take it; and he was quite surprised that I should have taken it for eight months and survived.

*Lord Chief-Justice Cockburn*—Where were you weighed at this time?—At the Oriental Club, in Hanover Square.

VII.—MR. GEORGE SEYMOUR, *sworn*.—*Examined by Mr. COLERIDGE.*

I live in Arundel Gardens, and am one of the firm of Seymour, Peacock, & Co., ship and insurance brokers, in Fenchurch Street. Up to the autumn of 1864 I had been suffering from chronic asthma. In the course of the autumn of 1864 some friend of mine mentioned Dr. Hunter's name to me, and I consulted him. Before that time I had consulted several eminent medical men in London without success. I consulted the late Dr. Addison, and was under his care for some time. I did not derive much benefit from them. I went in the autumn of 1864 to Dr. Hunter. He examined me most minutely with a stethoscope, and afterward prescribed for me. I consider that I have been under his care ever since. He has done me a very great deal of good. My disease was chronic asthma of many years' standing—just seventeen years; since November, 1849. The treatment was by inhalation and medicine. Partly one, partly the other. The success was quite marked. I have reason to be perfectly satisfied with the treatment, and with Dr. Hunter



himself, and with his charges. I have had several acute attacks of inflammation of the lungs, which Dr. Hunter has treated me for. He treated me successfully.

*Lord Chief-Justice Cockburn*—That is when the inflammation was acute?—Yes.

*To Mr. Coleridge*—The treatment varied according to the disease. I had in my house a relation of my own, whom he also treated—a nephew; he was most successful in that case.

*Lord Chief-Justice Cockburn*—What was the matter with your nephew?—General debility, and an affection of the mucous membrane of the nose; a stoppage in the head, and his hearing affected. That was eighteen months since. He made a perfect cure of him, and the lad has grown stout and strong. Inhalation was resorted to, and some other things I am not acquainted with—syringing the nostrils. The main affection was an affection of the nostrils, as the doctor described it to me, the mucous membrane of the head. It was a perfect cure. There was also a young lady in my house, a relation of my wife; she was also very much benefited. She was only a short time under his treatment; probably two months. *Lord Chief-Justice*—What was that for?—For asthma; she has been much better since.

*Cross-examined by Mr. KARSLAKE.*

She was with him probably fifteen or sixteen months ago. The asthma did not come on when she



was at my house; she had suffered from asthma many years before—from a child. She got better under his treatment. My nephew was a badly-grown boy. I sent him abroad, to South America, for his hearing, and he got better from the voyage; he was away sixteen months. On his return I sent him to school in France, and the deafness came back to him; he came back quite deaf; then I sent him to Dr. Hunter, and the result was what I have stated. You could observe by his speech there was a stoppage of the nostrils. I have seen Dr. Hunter treating him. He inhaled through the nostrils.

*Lord Chief-Justice Cockburn*—Was the syringing to ascertain the state of the nostrils? I should think it was to open the passage.

*To Mr. Karlake*—I have been under homeopathic doctors. I tried it for some months. The treatment of Dr. Hunter, other than inhalation, was certain draughts, and matters in that way, which I do not understand, with embrocations. The inhalation was, as I imagined, more especially for the chronic disease. After the inhalation there was generally a small dose of what he called alterative; a teaspoonful, mixed with water, which I took after each inhalation.

*To Mr. Coleridge*—You were some months under homeopaths who did you no good?—I was nine months under the celebrated Dr. Cary, who did me no good.

VIII.—COLONEL FELIX THURBURN, *sworn*.—  
*Examined by Mr. COLERIDGE.*

I was a lieutenant-colonel in the Indian army. For many years I suffered from inflammation of the mucous membrane—a sort of chronic catarrh. The irritation had continued for several years. I had been more or less under treatment for it for some years without success. I consulted Dr. Hunter in the autumn or the winter of 1864. He examined the nostrils and my throat, and treated me for the irritation. He told me it would be a very tedious case—take a very long time. He did me good during the time I was under him.

*Lord Chief-Justice Cockburn*—How long were you under him?—About three months, I think; I had occasion to go away from London. He did me good during those three months.

*To Mr. Coleridge*—I have not had so much headache since as I used to have. I used to have headache accompanying it. .

*Lord Chief-Justice Cockburn*—You have not been under him now for how long?—For eighteen months.

*To Mr. Coleridge*—The headache is much improved. The improvement of the headache dates from the time of consulting him. He told me at the time of the first or second examination that it would take a very long time to cure. He told me there was a cavity he could not reach hereabouts,

between the eyes. A little previous to my going under his treatment, a month or so, Mrs. Thurburn consulted him. He did her good; very much so; she benefited very much. It was more a *bronchial* or *lung* complaint. She got stouter under his treatment, and much better. During the time that Mrs. Thurburn was under him I also was under him. We were satisfied with his treatment; very much so. He was very attentive to us both. When we left his treatment, he told us that any time we liked to come he would take up the case without any further charge. His charges were very moderate.

*Cross-examined by Mr. KARSLAKE.*

They were the usual charges—one guinea in the first instance, and five guineas a month. Mrs. Thurburn was with him in the first instance. I should fancy she was under his care about four months. Speaking from memory, I was three months. I came home from India under medical treatment, in 1862. The first time I suffered this inconvenience was in India, twelve or fifteen years ago. It had been going on more or less ever since. I had been under the treatment of several medical officers in India. I had not consulted any one in London before Dr. Hunter—not since I came home, in 1862. Previously I did, when on furlough. I used a kind of pastille, by Dr. Hunter's advice—you may call it inhaling through the nose—and some alterative medicine.

IX.—MR. HENRY REEVES, *sworn*.—*Examined*  
by Mr. COLERIDGE.

I live at Winterborne, in Wiltshire, near Swindon. I have a large farm there. For some fifteen or sixteen years before consulting Dr. Hunter, I had been suffering from what is called dry asthma. I had consulted several medical men for it, but with no success. I had changed my place of abode from time to time, and tried the south of England, the Channel Islands, and other places, in order to get any benefit I could. I derived great benefit from these changes some few years previous to consulting Dr. Hunter, but as soon as I returned to my native country I felt bad again. I found no benefit from traveling the year I consulted Dr. Hunter. In the autumn of 1864 I had fallen away very much in weight, and I consulted Dr. Hunter. It was the early part of November. He examined me minutely, and began to treat me from that day. I remained in London, under his immediate' superintendence, for nearly a month. By the end of a month I had got very much better, so much so that I was able to return home. When I first consulted Dr. Hunter, he said I should go to a warmer climate and remain there for the winter, but I got better under his care, and was able to go home for all the winter.

*Lord Chief-Justice Cockburn*—At the end of the month you were materially better?—I was very much better indeed.

*Mr. Coleridge*—Did you continue Dr. Hunter's method of treatment after you got home?—For three months after. After that I saw Dr. Hunter once a month. I went up and saw him. He gave me instructions for the intermediate time, and a fresh supply of medicines. I improved very much in weight, and got back more than I had fallen away. At the end of three months from the time I left London—four months after I had commenced the treatment—Dr. Hunter told me I need not continue it longer. I had better take a month's supply in case of a relapse. I have that by me yet. I have had no relapse.

*Lord Chief-Justice Cockburn*—You have been quite well ever since?—I have been quite well ever since.

*To Mr. Coleridge*—I was perfectly satisfied with the way Dr. Hunter treated me. I never received so much consideration from any other medical man. His charges were precisely the same as we have heard.

*Cross-examined by Mr. KARSLAKE.*

I had the *inhaling*, the *alterative* medicine, an *embrocation* to rub into the chest, and *pastilles* to burn in my room at night. I used the alterative and embrocation from time to time—the alterative throughout the whole treatment. I think I left off the embrocation after some time. I continued the

inhaling all the four months. I never missed once. It was changed from time to time. That I judged of by the taste, and Dr. Hunter told me he was changing it. I had lost weight so very much that, in fact, I could *scarcely walk with a stick* before I went to Dr. Hunter. That was in the autumn of 1864. I recovered my weight within three or four months. I think I weighed *ten stone two* previously; when I went to Dr. Hunter I weighed nine stone four, as near as I can recollect. I regained my weight, and I have kept it ever since.

*Lord Chief-Justice Cockburn*—You got back to your old weight?—Just so.

*To Mr. Karlake*—I was under Dr. Hunter, November, December, January, February, and March, one month of which in London.

*To Mr. Coleridge*—The effect of that month in London has remained ever since.

X.—Mr. THOMAS DUNN, *sworn*.—*Examined by*  
Mr. COLERIDGE.

I live at Reigate. I was the first mayor of Reigate, and am still an alderman. I have for many years suffered from asthma. Before I consulted Dr. Hunter I had spoken to my own medical man, who did not pay any great attention to it; and, considering it was a disorder utterly incurable, I did not trouble myself about it. I felt it was useless to

go to any medical man. I felt it was incurable. It was very painful and inconvenient to me. I consulted Dr. Hunter in May, 1866. He has done me a great deal of good; so much so that I feel it almost a duty to recommend any of my friends attacked with asthma to consult him; and I have recommended several who have derived great benefit. My life has been very much more comfortable. I am very well satisfied indeed. He treated me with inhalations, and other medicines besides.

*Cross-examined by Mr. KARSLAKE.*

I thought it was generally acknowledged that asthma was incurable. I was induced to go to Dr. Hunter from the recommendation of a friend who had received so much benefit that he urged me to go, and at last I was induced to go. That was in May, 1866. I kept on with the treatment from May regularly until within a week or two, when I was so much better that Dr. Hunter considered that I might leave off inhaling *three* times a day, and do so only *once*, which I am now doing. I have taken other medicines Dr. Hunter has given me. I have been exclusively under his care. I am not aware that the inhalations were changed from time to time. I did not discover any particular difference; there may have been; I did not notice it. I believe my disease was dry asthma.



XI.—MR. EDWARD CONDER, *sworn*.—*Examined by Mr. COLERIDGE.*

I carry on business at the Baltic Wharf, Kingsland Road. I consulted Dr. Hunter early in 1865. I had been suffering from asthma about three years. I had consulted several of the best physicians in London. They did not cure me. Dr. Hunter examined me with a stethoscope. He treated me for three months. At the end of that time I was very much better—I was not cured; I was very much better. Occasionally I had a relapse—very little. When I had a relapse I applied the inhaling. It did me good directly—in a few days. Comparing my state before I saw Dr. Hunter with that I am in now, I think myself permanently better. If I catch a little cold by walking too fast, I may have a relapse; but it is only for a day or two, and then I apply the inhaling. I seldom have it now; before, I had it once every week. I am quite satisfied with what Dr. Hunter has done for me, and with the charges he made.

*Cross-examined by Mr. KARSLAKE.*

When I get a relapse I use the inhalation. No medicine—*nothing but the inhaling*. I had an alterative given me. I had suffered about three years.

*Lord Chief-Justice Cockburn*—Did it cause you much inconvenience?—I was often obliged to *sit up all night*. I could not lie down; when I lay down

I fancied I was going to die. I could not breathe. That is entirely relieved, except when I have a little relapse; except when a little relapse comes on, I have been entirely relieved from that.

XII.—MR. JAMES NORE LEE, *sworn*.—*Examined by Mr. COLERIDGE.*

I am one of the editors of *Bell's Weekly Messenger*. Before consulting Dr. Hunter I had suffered from asthma about twelve years. I had consulted other medical men, with slight success for a time—no permanent advantage. In September or October, 1864, I consulted Dr. Hunter. He examined me with a stethoscope. I was under his treatment two months; besides the asthma, I labored under a polypus; both the nostrils were filled. The last physician whom I consulted, when I called his particular attention to that, told me it was not a matter of much consequence; but under Dr. Hunter's treatment I was relieved from that; it was taken out. I had not been under his treatment more than three weeks before the cough, which had previously been of a very distressing character, with copious and very foul expectoration, left me; and in two months my cough was greatly relieved.

*Lord Chief-Justice Cockburn*—You had bad expectoration?—Yes, very foul expectoration, frequently *streaked with blood*. At the end of *two months* I

felt myself so well that I did not think it needful to go to Dr. Hunter any more. I felt myself quite well, and discontinued my attendance on Dr. Hunter. In the course of the summer, I found the polypus was growing again. I had taken cold, and a difficulty of breathing came on. I consulted Dr. Hunter, and underwent another examination. He treated my nose as he had done before. I had hoped he had effectually removed the polypus; but I am rather doubtful on that point. I think a little of it is still remaining; but as far as my general health is concerned, I can only say that I am a perfectly different man to what I was before I went to Dr. Hunter. I need hardly say I am perfectly satisfied with what he has done; and with his charges, most decidedly.

*Cross-examined by Mr. KARSLAKE.*

I was not aware what the polypus was until Dr. Hunter told me. I had felt the effect of it. I could not breathe through my nose but with great difficulty. I suffered from great difficulty of breathing and a very severe cough and expectoration. Dr. Hunter operated on me for the polypus. I felt better before it was removed. The course of treatment was what you have heard described by several gentlemen—the inhaling through the mouth, and using the *pastille* at night, and taking the alterative after inhaling—nothing more. I concluded my

complaint was asthma. I had great difficulty in breathing, and *copious foul expectoration*.

*To Lord Chief-Justice Cockburn*—If there were any obstruction in the nostrils by polypus there would be a difficulty of breathing through the nostrils. I had also difficulty in breathing through the throat.

*To Mr. Karlake*—I had experienced a difficulty in breathing through the throat for years. The stoppage in the nostrils had been going on for a number of years. It got very bad before I went to Dr. Hunter.

*Lord Chief-Justice Cockburn*—When did he remove the polypus?—I think in the course of the first two months. He removed that surgically. He commenced to perform the operation the second time I saw him. It was not done at once; it was a very tedious affair.

XIII.—MR. JAMES EIVES, *sworn*.—*Examined*  
by Mr. COLERIDGE.

I carry on business at 61 King William Street. I have known Dr. Hunter since he came to England. Before the autumn of 1864 I had been suffering from a bad malignant catarrh for a long time. I had consulted physicians about it and got some relief, but not permanent or perfect. In October, 1864, I consulted Dr. Hunter. He examined me; after which he treated me by inhalation. I became

much better under his care, and the improvement continued. I was under his treatment for three or four months—from November to March. It produced quite an improvement in my health. I have had recourse to no other doctor. He has done me good, and improved my health most entirely; I have been well since.

*Lord Chief-Justice Cockburn*—You have had no return of this?—No return.

*To Mr. Coleridge*—A member of my family has also been under him—my daughter. She also has benefited by his treatment very greatly. Hers was a chest attack, and she benefited greatly. I am quite satisfied with what Dr. Hunter has done, and with what I have had to pay for it. I think I got money's worth for my money.

*Cross-examined by Mr. QUAIN.*

I had had this bad catarrh more or less for some three or four years. It was a polypoid affection of the nose. At times there was a very considerable discharge. I was under Dr. Hunter's treatment from November to March. I used to go every week during the earlier part of that time.

*Lord Chief-Justice Cockburn*—Was there any surgical operation?—I had had them, but not under Dr. Hunter.

*To Mr. Quain*—I can hardly remember whether

any probe was used by Dr. Hunter. I have had that done by different medical men. I consulted him last in March, 1865. I have had no necessity to continue the treatment since. I inhaled through the nose entirely. I inhaled entirely at my own house; he *injected* the nostrils at his house.

XIV.—MR. CHARLES BUSS, *sworn*.—*Examined*  
by Mr. COLERIDGE.

I carry on business on Holborn Hill. I have been nearly all my life subject to spasmodic asthma. I have suffered from it so severely as to interfere with the comfortable discharge of my business for months together. I have been under several very eminent physicians for it. They gave me some relief, but where we were at issue was, that they administered chloride ether, which so affected my stomach that I rebelled against it. My stomach rebelled against the medicine. After taking it I found that I could not eat any thing. I was advised to take nourishing things, but the medicine produced such a sickness that I could not eat any thing. My stomach *objected* to the medicine. In October, 1864, seeing Dr. Hunter's letter published in the *Times*, and having a predisposition to inhalation, I was induced to go to him to see if I could escape from the ether. I placed myself under his care. Having been examined by him, he told me my lungs were very sensitive and

tender, which I knew well before. He was very successful indeed; so much, that after I had been under him *a month* I felt myself so much better that I declared off his books. I should tell you that Dr. Hunter was in my case very liberal—he may be with others—but he gave me a supply of medicines which lasted me considerably longer than my month, for which I paid six guineas. He had so many patients I was obliged to wait for my turn, and I told him for the future I should write to him and have his medicines sent to me, which I have done; and I may say with truth, had I not had the benefit of his medicine I could not have ventured out in the heavy fog. I am much better for it. He has done me real good; he has given me the inhalation instead of this abominable ether, which I scarcely ever think of without vomiting. I am perfectly satisfied with what he did for me and what I have paid. The last case of medicines he sent me, for which I paid five guineas, has lasted me, with economy—and I am very careful in all my habits—*three months*, which is about 8s. 9d. per week, which I think is not extravagant for a doctor's bill.

*Cross-examined by* Mr. KARSLAKE.

I live at No. 34 Holborn Hill.



XV.—MR. HENRY CAWTHRA, *sworn*.—*Examined by Mr. COLERIDGE.*

I am a Canadian barrister, when at home living at Toronto. My family, of the last generation on both sides, lived in England. I do not know whether my family knew Dr. Hunter's father in England. In Canada I knew Dr. Hunter and his family. I have known him since I was a boy. He was our family doctor. I have been under Dr. Robert Hunter. I had chronic catarrh, or an affection of the nostrils, almost ever since I can remember—from boyhood. My nostrils were so stopped up that sometimes I was almost suffocated when eating. I had great difficulty in eating; it necessitated breathing through the mouth while eating. I had consulted medical men in Canada without success. I went to New York, where he was practising. He examined my chest and pronounced it perfectly sound. He injected different things into the nostrils by a little instrument which he put into the mouth and injected it through the nostrils instead of running down the throat as other doctors had made it do; it came through the nostrils and gave me instant relief. I pursued that practice with him for some time. I think I may attribute the cure to his treatment entirely. I have been better ever since I consulted him; it has lost its chronic state.

*Lord Chief-Justice Cockburn*—Just while the cold

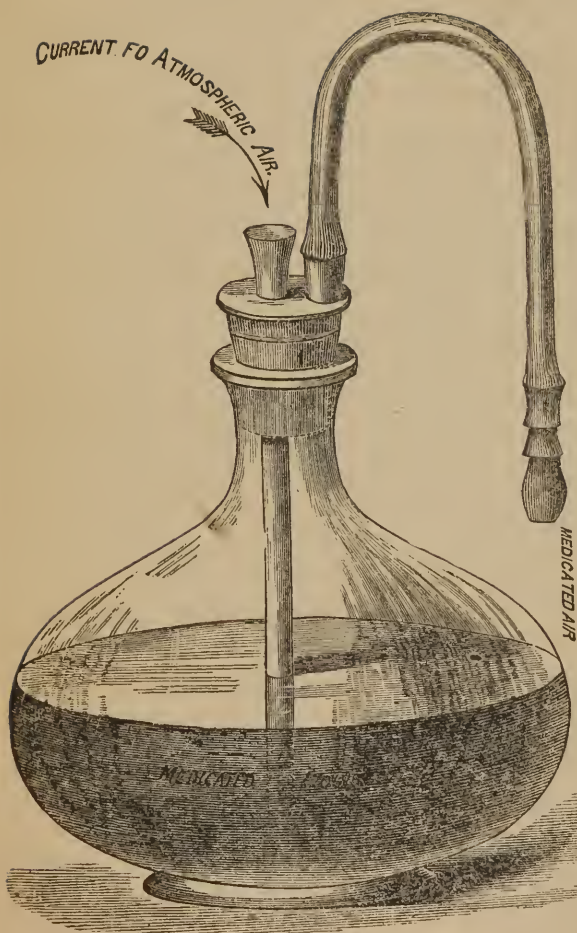
lasts?—Yes. Dr. Hunter gave me a prescription, which I use when I have a severe cold.

*To Mr. Coleridge*—He also treated my mother-in-law for asthma. She was subject to asthma. She came over to England with me. She was not treated by him while she was here. She sent over from Jersey for some of his pastilles.

*Cross-examined by Mr. KARSLAKE.*

I think it was in 1854 that I consulted Dr. Hunter. I was then residing at Toronto. I went to New York to see him. I suppose my disease was the result of frequent colds. I mean by catarrh a distressing feeling in the nostrils and immediately behind the palate. I do not know the medical term. I used both the syringe and inhalation together. The syringe did most service; but I used to derive great solace from an inhalation he gave me through the nostrils. That unpleasant feeling has not continued. My nostrils are now as free as I could wish.



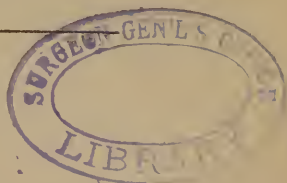


THE INHALING INSTRUMENT.

## THE INHALING INSTRUMENT.

The inhaling instrument, which holds about a pint of fluid, is composed of a glass globe, or flask, closed by a metallic-capped stopper pierced by two holes, through one of which a glass tube communicating with the *atmospheric air* passes into the *medicated fluid*. To the other is attached an elastic tube, about a foot in length, tipped with a glass mouth-piece, for the passage of the medicated vapor from the instrument.

The manner of using it is as follows: Having half filled the globe with hot, warm, or cold water, as may be thought best adapted to the case by the physician, add the medicine prescribed. Then, by *inhaling* from the mouth-piece, the *atmospheric air* will be drawn down the glass tube, and, passing through the medicated fluid, will *take up the medicines* and convey them *into the lungs* in a state of *vapor*, producing not only a *local action* on the throat, larynx, and bronchial tubes, but also passing into the *blood*, and affecting by their *constitutional action* the entire system

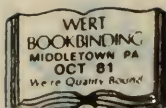


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